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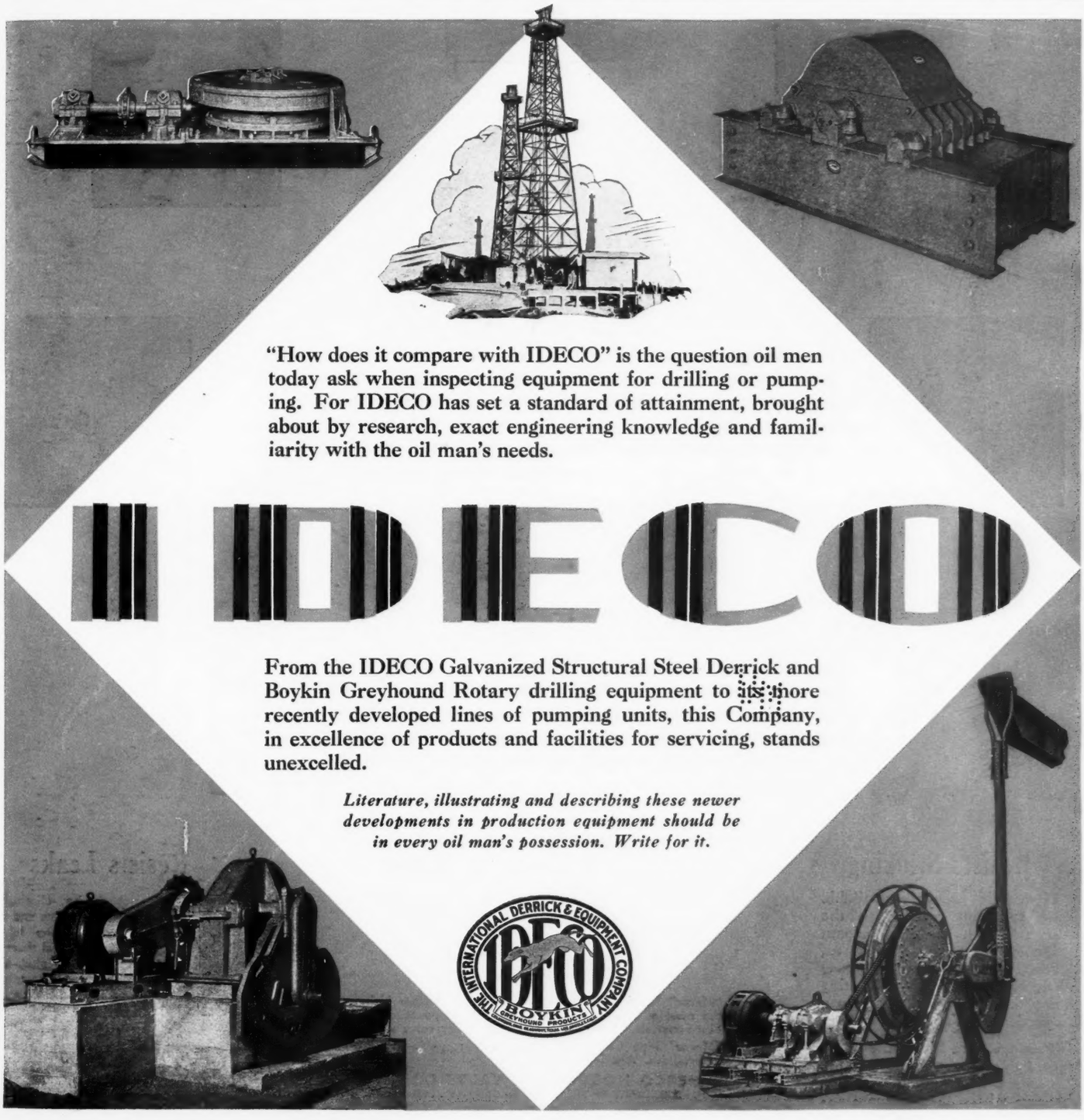
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Advertisers' Index on Page 25 Table of Contents on Page 26

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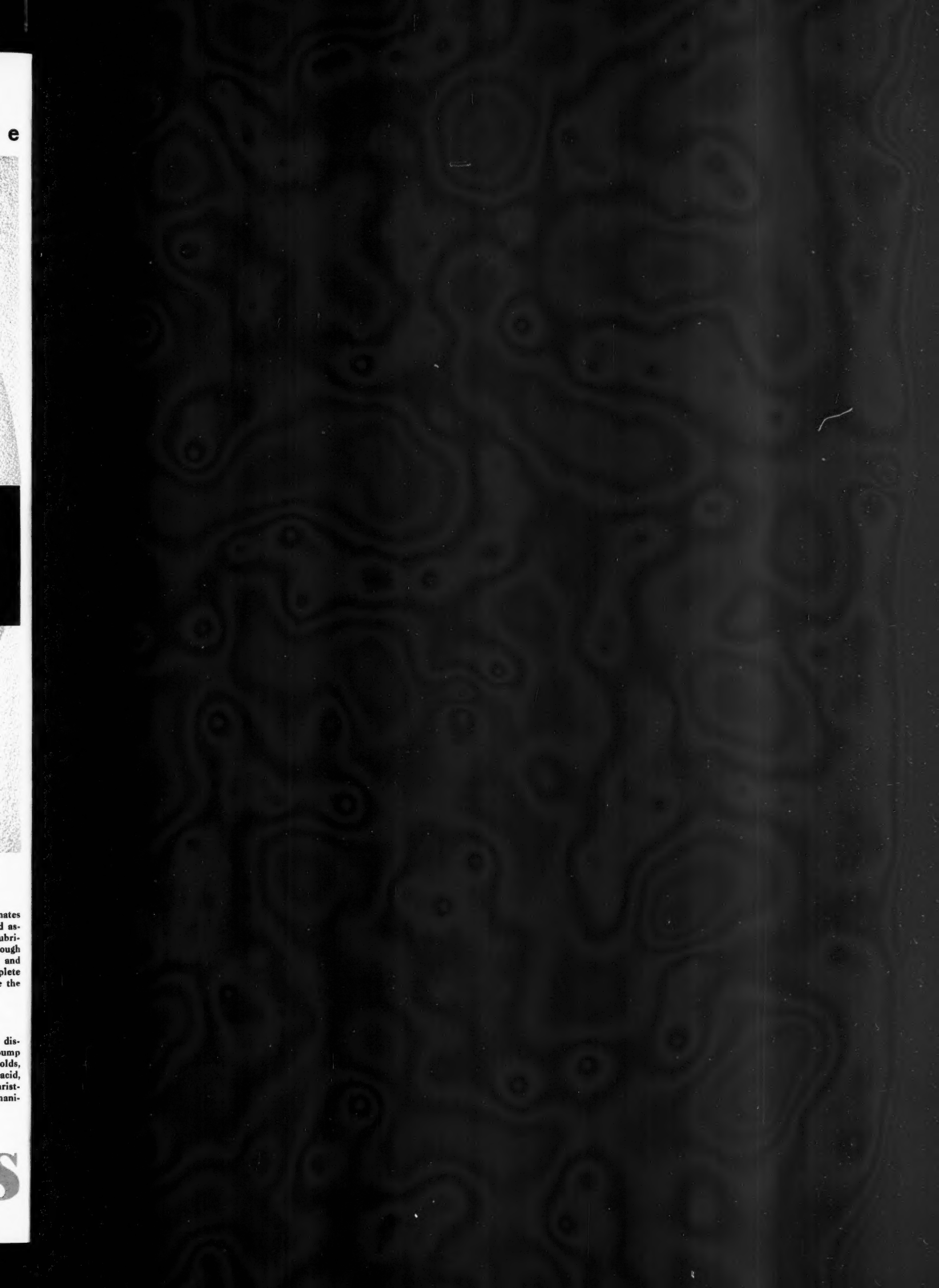

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Bald
Barb
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Bartl
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Beau
Besse
Bethl
Bigel
Bigna
Birm
Black
Black
Bosch
Brade
Braun
Brews
Bridg
Bristo
Brode
Brode
Brown
Brown
Bucke
Buda
Burfor
Butler
Byron

Califor
Co. .
Califor
Camero
Campbe
Carey,
Caterpi
Central
Central
Chain
Champi
Chaplin
Chapma
Chicago
Chicago
Cincinna
Clark B
Classifie
Clevelan
Climax
Colona
Columbi
Columbi
Columbu
Consolid
Continer
Continer
Cooper,
Cooper-
Cooper,
Coppus
Corona
Crane C

D. & B.
Darling
Dart, E
Davis R
Dayton-
Dayton
Dearbor
Deep R
Devine
Dixon C
Dodge
Doheny
Donner
Donova
Dow Ch
Drane-
Dresser

The ADVERTISERS' INDEX

A

Acme Fishing Tool Co.
Air Preheater Corp., The
Ajax Iron Works
Alco Oil Tool Co., Inc. 113
Allegheny Steel Co.
Allen Corp., The
Allis-Chalmers Mfg. Co.
Allsteel Products Mfg. Co., Inc., The
Aluminum Co. of America 8A-8B
American Askania Corp.
American Association of Petroleum Geologists, The
American Cable Co., Inc. 179
American Car & Foundry Co.
American Cast Iron Pipe Co. 165
American Iron & Machine Works Co.
American La France & Foamite Corp.
American Meter Co.
American Radiator Co.
American Rolling Mill Co., The
American Schaefer & Budenburg Corp.
American Sheet & Tin Plate Co.
American Steel & Wire Co.
American Steel Works
American Tank & Equipment Corp. 98
American Telephone & Telegraph Co.
American Well Works, The 178
Anchor Post Fence Co.
Armstrong Brothers Tool Co. 177
Armstrong Machine Co.
Athey Truss Wheel Co. 178
Axelson Mfg. Co., Ltd.
Ayer & Lord Tie Co.

B

Baash-Ross Tool Co.
Badger, E. B., & Sons Co.
Badgett Steam Lubricator Co.
Baker Oil Tools, Inc. 4
Baldwin-Duckworth Chain Corp.
Barber-Greene Co.
Barco Mfg. Co. 20
Barnes Mfg. Co., The
Barnickel, Wm. S., & Co.
Barnsdall Refineries, Inc.
Barrett Co., The
Bartlett Hayward Co., The
Bart Products Co. 173
Bausch & Lomb Optical Co.
Beaumont Iron Works Co., The
Bessemer Engine Co. 60-61
Bethlehem Steel Co.
Bigelow-Liptak Corp.
Bignall & Keeler Machine Works
Birmingham Tank Co.
Blackor Co.
Black, Sivalls & Bryson, Inc. 63
Bosch, Robert, Magneto, Inc.
Braden Steel Corp.
Braun, C. F., & Co.
Brewster Co., Inc., The 106
Bridgeport Machine Co.
Bristol Co., The 164
Broderick & Bascom Rope Co. 176
Broderick Co., The 45
Brown, Arthur C. 178
Brown Instrument Co.
Buckeye-Traction Ditcher Co.
Buda Engine Service Co. of Tulsa 173
Burford Oil Co.
Butler Mfg. Co. 122
Byron Jackson Co. 83

C

California Manufacturing & Engineering Co. 104
California Talc Co.
Cameron Iron Works, Inc.
Campbell Co., J. A. 96
Carey, The Philip, Co.
Caterpillar Tractor Co. 108
Central Alloy Steel Corp.
Central Tube Co.
Chain Belt Co.
Champion & Barber, Inc.
Chaplin-Fulton Mfg. Co., The 166
Chapman Valve Mfg. Co., The
Chicago Bridge & Iron Works 24A-24B
Chicago Pneumatic Tool Co.
Cincinnati Advertising Products Co., The
Clark Brothers Co. 124
Classified Wants 136-137-150
Cleveland Trencher Co., The
Climax Engineering Co.
Colona Mfg. Co.
Columbian Rope Co.
Columbian Steel Tank
Columbus Forge & Iron Co., The
Consolidated Ashcroft Hancock Co., Inc.
Continental Equipment Co.
Continental Supply Co., The 89
Cooper, Bernard
Cooper-Bessemer Corp., The 60-61
Cooper, C. & G. Co., The 60-61
Coppus Engineering Corp. 166
Corona Silica, Inc.
Crane Co. 64-65

D

D. & B. Pump & Supply Co.
Darling Valve and Mfg. Co.
Dart, E. M., Mfg. Co.
Davis Regulator Co. 123
Dayton-Dowd
Dayton Rubber Mfg. Co., The
Dearborn Chemical Co.
Deep Rock Oil Corp.
Devine Mfg. Co., Inc., J. P.
Dixon Crucible Co., Joseph
Dodge Brothers Corp.
Doheny Stone Drill Co.
Donner Engineering Co.
Donovan Boiler Works, Inc.
Dow Chemical Co., The
Drane-Humphrey Co., Inc.
Dresser & Gorton, Inc.

D

Dresser, S. R., Mfg. Co. 37
Driftmeter, Inc. 127
Du Pont de Nemours & Co., Inc., E. I.

E

Eagle-Picher Lead Co. 6
Economy Pump & Oil Tool Co., The
Edelblute Co., T. H.
Edeleanu Co., Ltd. 111
Edward Valve & Manufacturing Co., The
Electric Machinery Mfg. Co. 23
Empire Oil & Refining Co.
Emsco Derrick & Equipment Co. 97
Ethyl Gasoline Corp. 168
Exchange Banks of Tulsa

F

Fenwick-Reddaway Mfg. Co.
First National Bank & Trust Co., The
First National Bank & Trust Co. of Oklahoma City, The
Fisher Governor Co. 9
Fluor Corp., Ltd.
Fort Worth Chamber of Commerce
Foster-Wheeler Corp.
Four-Wheel Drive Auto Co., The
Foxboro Co., Inc., The 84
Franklin Valveless Engine Co. 15
Frates Co., The
Freeman Mfg. Co.
Frick-Reid Supply Corp. 131
Fulton Iron Works Co.

G

Gardner-Denver Co.
Garlock Packing Co., The
Gaso Pump & Burner Mfg. Co. ....Inside Back Cover
General Electric Co. 21
General Paint Corp.
Gilbert & Barker Mfg. Co.
Globe Oil Tools Co.
Goodrich, B. F., Rubber Co., The
Goodyear Tire & Rubber Co.
Gosiin-Birmingham Mfg. Co.
Gott, H. P., Mfg. Co., Inc. 174
Goulds Pumps, Inc.
Granger Indicator Co.
Granite City Steel Co.
Grant Oil Tool Co.
Graver Corp.
Gray Process Corp., The
Griscom-Russell Co., The 143
Guiberson Corp., The 73
Gulf Refining Co. 172

H

Halliburton Oil Well Cementing Co. 17
Hamer Oil Tool Co., Ltd. 8
Hanson-Waters, Inc.
Harrisburg Pipe & Pipe Bending Co.
Haynes Stellite Co.
Hazard Wire Rope Co.
Hedges-Walsh-Weidner Co., The
Heeter, Sons & Co., Inc., C. M. 178
Hercules Motors Corp. 128
Hercules Tool Co.
Hewitt-Gutta Percha Co. 135
Heydrick Mapping Co. 178
Hill, Hubbell & Co.
Hills-McCanna Co. 161
Hood, H. H.
Hope Engineering Co.
Hough, Charles N., Mfg. Co., The
Hughes Tool Co. ....Back Cover
Humble Oil & Refining Co.
Hyatt Roller Bearing Co.

I

Imperial Belting Co.
Imperial Royalties Co.
Independent Oil & Gas Co.
Ingersoll-Rand Co.
International Composition Co., Inc. 174
International Derrick & Equipment Co., The ....Front Cover
International Harvester Co. of America
International Nickel Co., Inc., The 101
International Petroleum Exposition and Congress
International Supply Co.

J

Jackson Co., Byron 83
Jackson Engineering Corp.
Jarecki Mfg. Co. 70
Jenkins Brothers 52
Jerguson Gage & Valve Co.
Jones & Laughlin Steel Corp. 18
Jones, The S. M., Co.

K

Kellogg, M. W., Co., The 105
Kelly, John Eoghan 178
Kennedy Valve Mfg. Co., The
Kerotest Mfg. Co. 14
Key Boiler Equipment Co.
Keystone Driller Co. 99
Kingham Trailer Co., Inc.
Kirk-Morrow Iron Works, Inc.
Kohler Co. 169
Koppers Co., The 167
K-W Ignition Corp., The

L

Landis Machine Co., Inc. 3
Larkin & Co.
Larkin Packer Co.
Layne & Bowler Co. 162
Leader Iron Works, Inc. 99
Lees-Bradner Co.
Lemons, Inc., Henry L.

L

Leonard Construction Co.
Leschen, A., & Son Rope Co.
Limbert & Co., Geo. B. 140
Lincoln Electric Co.
Linde Air Products Co.
Link Belt Co.
Longyear, E. J., Co.
Lorraine Corp., The
Lucey Products Corp.
Ludlow Valve Mfg. Co. 160
Lufkin Foundry & Machine Co., The
Lufkin Rule Co. 178
Lummus, The Walter E., Co.
Lunkenheimer Co., The

Mc

McAlear Mfg. Co., The
McClintic-Marshall Co.
McCord Radiator & Mfg. Co.
McEveriast, Inc.
McEvoy, J. H., & Co.
McIntosh & Seymour Corp.
McKee, Arthur G., & Co.

M

MacClatchie Mfg. Co.
Macwhyte Co. 13
Magnolia Petroleum Co.
Maloney Tank Mfg. Co. 100
Manzel Brothers Co.
Marion Machine Foundry & Supply Co.
Marley Co., The
Marsh Gauge Pole Co. 177
Martin-Decker Corp.
Mason Regulator Co.
Medart Co., The
Merco Nordstrom Valve Co. ....Inside Front Cover
Meriam Co., The
Metric Metal Works
Midwest Piping & Supply Co., Inc.
Miller Sand Pump Co.
Moon Mfg. Co., The
Moore, Lee C., & Co., Inc. 57-58
Morris, I. P., & De La Vergne, Inc.
Muller Co., The Jno. 152
Munn & Co. 178
Murray Tool & Supply Co.

N

National Equipment Corp. 132
National Lead Co.
National Petroleum Engineering Co. 178
National Supply Co. 92-93
National Tank Co.
National Tank Seal Co.
National Tool & Metal, Inc.
National Transit Pump & Machine Co. 41
National Tube Co. 50
Natural Gas Equipment Co.
Naylor Pipe Co.
Neilan Co., Ltd. 16
Nitrose Co., The
Norris Bros., Inc.
North American Car Corp.
Novo Engine Co.
Nye Tool & Machine Works, The 7

O

Oakite Products, Inc.
O'Brien Steel Construction Co.
Ohio Injector Co., The
Oil Conservation Engineering Co., The
Oil Countries Specialties Mfg. Co., The
Oil Insurance Ass'n
Oil and Gas Journal, The 171
Oil Well Improvements Co.
Oil Well Supply Co. 135
Oklahoma Contracting Co.
Oklahoma Gas & Electric Co. 157
Oklahoma Portland Cement Co.
Oxweld Acetylene Co. 12

P

Page & Hill Co.
Panyity, L. S. 178
Parkersburg Machine Co.
Parkersburg Rig & Reel Co., The 19
Patrick, R. S. 170
Patterson-Ballagh Corp. 90
Pattin Bros. Co.
Penberthy Injector Co. 39
Petroleum Engineering, Inc. 107
Petroleum Equipment Co. 152
Petroleum Iron Works Co.
Pforzheimer, Carl H., & Co. 173
Phillips Petroleum Co. 178
Piepmeyer & Co.
Pittsburgh-Des Moines Steel Co.
Pittsburgh Equitable Meter Co. 79
Pittsburgh Screw & Bolt Corp. 121
Pittsburgh Steel Products Co.
Pittsburgh Valve, Foundry & Construction Co.
Pomona Pump Co.
Powell, William, Co.
Power Piping Co.
Prescott Co., The
Pressed Steel Car Co. 179
Prest-O-Lite Co., Inc., The
Public Service Co.
Pure Oil Co., The 175
Pyle-National Co., The

R

Reading Iron Co. 24
Reading Steel Casting Co., Inc.
Reed Roller Bit Co.
Regan Forge & Engineering Co. 22
Reid, Joseph, Gas Engine Co. 118
Republic Steel Corp. 67-68
Republic Supply Co.
Resistcor Engineering Corp.
Robinson Orifice Fittings Co.
Ross-Meehan Foundries Co.

S

Safety Gas Main Stopper Co. 178
St. Louis Cordage Mills
St. Louis Surfacer & Paint Co.
Scandinavia Belting Co.
Schramm, Inc. 119
Sears Map & Blue Print Co. 178
Shaffer Tool Works
Shaw, S. F.
Shawnee Chamber of Commerce 157
Sheldon Machinery Corp.
Sherwin-Williams Co.
Sinclair Refining Co. 147
Sivyer Steel Casting Co.
Skelly Oil Co. 159
Smith, A. O., Corp. 10-11
Smith Co., E. M.
Smith Engineering Co.
Smith, H. C., Mfg. Co.
Smith Separator Co.
Smooth-On Mfg. Co.
Soph, Edward
South Chester Tube Co. 117
Southern Cornice Works
Southwestern Engineering Corp. 35
Southwest Welding & Mfg. Co.
Sowers Manufacturing Co.
Spang & Co. 163
Spang, Chalfant & Co., Inc.
Spencer Trailer Co.
Spengler Tool Co. 2
Sperry-Sun Well Surveying Co.
Star Drilling Machine Co.
Steiner, George 177
Stockham Pipe & Fittings Co.
Stoody Co. 120
Stork Engineering Co.
Strong, Carlisle & Hammond Co., The
Strong Oil Tool Co.
Sullivan Co., The 153
Sullivan Machinery Co.
Sun Shipbuilding & Dry Dock Co.
Superheater Co., The 95
Sureshot Torpedo Co. 178
Swedish American Prospecting Corp. 177
Swindell-Dressler Corp.

T

Taubman Supply Corp.
Taylor Instrument Companies
Templeton, Kenly & Co., Ltd. 177
Texas Iron Works
Texas Power & Light Co.
Thompson, J. D., Jr. 178
Timken Roller Bearing Co., The 54
Titusville Iron Works Co.
Toledo Pipe Threading Machine Co., The. 103
Trackson Co.
Trimont Mfg. Co. 170
Truman-Smith Construction Co.
Tube Turns, Inc.
Tulsa Boiler & Machinery Co.
Tulsa Chamber of Commerce
Tulsa Sheet Metal Co. 174
Twin Disc Clutch Co. 47

U

Union Carbide & Carbon Corp. 12
Union Mfg. Co.
U. S. Electrical Mfg. Co.
Union Steam Pump Co. 176
Union Wire Rope Corp.
United Engineers & Constructors, Inc.
Universal Engineering Co.
Universal Oil Products Co. 80-81
Utility Trailer Mfg. Co.

V

Vacuum Oil Co.
Vellumoid Co., The
Vez Co., The 43
Victaulic Co. of America 77
Victor Balata & Textile Belting Co.
Victor Welding Equipment Co.
Vogt, Henry, Machine Co. 86-87

W

Wagner Electric Corp.
Wailes, Dove-Hermiston Corp.
Wall Rope Works, Inc.
Walworth Co. 1
Ward Chemical Corp.
Warren Petroleum Co.
Washburne, Chester W. 178
Waukesha Motor Co.
Wesco-Chippewa Pump Co.
Westcott Valve Co.
Western Gas Construction Co., The 167
Westinghouse Electric & Mfg. Co., The
West Texas Utilities Co.
Wheelton & Townsend, Inc., Ltd.
White Co., The
Wickwire Spencer Steel Co.
Wico Electric Co.
Wieman-Kammerer-Wright Co., Inc.
Wilgus Mfg. Co., The
Williams Bros., Inc.
Williamsport Wire Rope Co.
Williams Tool Corp.
Wilson-Snyder Mfg. Corp.
Wilson Welder & Metals Co., Inc. 48
Winkler-Koch Engineering Co., The
W-K-M Co., The
Wood Shovel & Tool Co., The
Worthington Pump & Machy. Corp. 5
Wright Machine Co., Inc., The 102
Wyatt Metal & Boiler Works

Y

Yale & Towne Mfg. Co.
Youngstown Sheet & Tube Co., The

Z

Zero Hour Torpedo Co., The

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Table of Contents

SPECIAL ARTICLES

Darst Creek Causes Gain in Production 27
By Andrew M. Rowley
New agreement should reduce output there this week. State-wide proration order for Texas expected soon.

Texas Proration Seems a Step Nearer 29
By L. E. Bredberg
Special meeting in Austin this week expected to be followed by state-wide order. Big meeting held last week.

Plan to Equalize Texas Production 29

Repressuring Successful at Sugarland 31
By Neil Williams
Efficient operation of this Gulf Coast Pool by Humble Oil & Refining Co. reduces net gas-oil ratio to 49 feet.

Design of Gravity Gathering Systems 32-33
By Paul L. Guarin
Proper planning will permit operation over long period of years at low over-all cost per barrel of oil handled.

Unitization Receives Practical Test 34
By L. G. E. Bignell
Interests in 640-acre block join together to develop area under guidance of Reiter-Foster Oil Corp. and Prairie Oil & Gas Co.

When Industries Compete (Editorial) 36

Acid Refining of Naphthene-Base Oil 38

Reeser Says Refinery Situation Better 40
By M. K. Thornton, Jr., W. A. Frier, T. A. Francis, C. F. McBurnett
Investigation shows 20-pound treat of lubricating distillate gives satisfactory results. Variety of tests made.

Landowners Reap Harvest From Exploration 55

Oil Field Photographs 66

Pipe Line Construction News 69

Field Problems and Their Solution 88
Edited by Thomas F. Smiley

Southwest District A.P.I. Program 110

July Oil Field Operations 114

National Tube Making Electric Welded Pipe 152
By B. E. V. Luty

Oil Burner Sales Decline 177
By Charles E. Kern

FIELD OPERATIONS

Late News From the Fields 40

Oklahoma 42
By W. A. Spinney

Kansas 44
By W. A. Spinney

Southwest Texas 46
By B. D. Stevenson

Louisiana-Arkansas 49
By D. H. Bancroft

Rocky Mountain Area 51
By Tolbert R. Ingram

Canada 53
By Victor Lauriston

California 55
By L. P. Stockman

Michigan 58
By Paul A. Elliott

Central West 59
By George A. Whitney

Kentucky-Tennessee 59
By George A. Whitney

Eastern Fields 62
By Special Correspondent

West Texas 71
By L. E. Bredberg

North Texas and Panhandle 72
By L. E. Bredberg

Gulf Coast 74
By Neil Williams

East Texas 155
By L. E. Bredberg

REFINING AND MARKETING

Natural Gasolines Continue Advance 28
By C. O. Willson
Smaller supply and increased demand restores 5-cent level on A grades. No general improvement in refinery market.

Further Decrease in Refinery Runs 30
By C. O. Willson
Mid-Continent operators will run 17,000 barrels less crude oil daily in August than in July.

Technical Questions Answered 85
By Dr. C. K. Francis

Consumption Heavy in Chicago Area 138
By John B. Waldo
Jobbers placing orders for entire monthly allotment of gasoline. Prices easy but improvement expected.

Inactivity Rules in Eastern Market 139
By A. E. Mockler
Steady undertone discerned in most refined products and oil industry generally views outlook with optimism.

Natural Gasoline Manufacture 141

Brief Items for Petroleum Refiners 142

Crude and Refined Oil Prices 144-145

Tank Wagon Quotations 146

Bureau of Mines Report for June 156

Of Interest to Sales Departments 158

ARTICLES OF GENERAL INTEREST

Advertisers' Index 25
Natural Gas Industry Developments 78
Personal Paragraphs About Oil Men 82
Oil Field Equipment and Supplies 91-94
Classified Want Advertisements 136-137
Oil Securities Markets 148-149
Crude Petroleum Statistics 180

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Refinery Section Starts on Page 138

Darst Creek Causes Gain in Production

Highest daily average estimated total production in 1929, week ended Aug. 24, 2,975,435 bbls. Lowest in 1929, Dec. 27, 2,595,320 bbls.

New Agreement Should Reduce Output There This Week. State-Wide Proration for Texas Expected Soon

Highest daily average estimated light oil production in 1929, week ended Sept. 14, 2,534,524 bbls. Lowest in 1929, Apr. 13, 2,142,036 bbls.

By Andrew M. Rowley

A 38,000-barrel increase in production of the Darst Creek Pool in Southwest Texas caused the total output of all fields in the United States last week to record a gain of 20,500 barrels daily over the average daily production for the previous week, although production of light oil last week showed a decrease of 18,000 barrels. The increase at Darst Creek was due to the temporary lifting of proration. Operators there have agreed to an arrangement whereby runs will be held to 39,215 barrels daily until August 15, at which time a new agreement will be arranged. If the present agreement is made entirely effective this week, production of the pool will show a substantial decline as the output last week averaged 74,550 barrels daily.

Operators confidently expect the State Railroad Commission will issue an order within the very near future prorating production of crude oil throughout the State. The plan presented to the commission contemplates a reduction in output totaling 125,000 barrels daily. The commission will hold another meeting this week to consider questions involved in statewide proration. Sentiment throughout Texas seems to be very largely in favor of statewide proration. As shown in the "score card on oil production" on page 40 of this issue Texas is the only major area in the United States producing more crude oil than its nominated quota under the recommendation of the special committee of economists of the Federal Oil Conservation Board.

Stabilization of crude oil production in Texas will insure prosperity for the entire petroleum industry as the overproduction problem has been solved in every other section of the country and operators in all other areas seem determined to continue the policy of conservation, which has been so successful, until burdensome stocks of both crude and refined oils are reduced very materially.

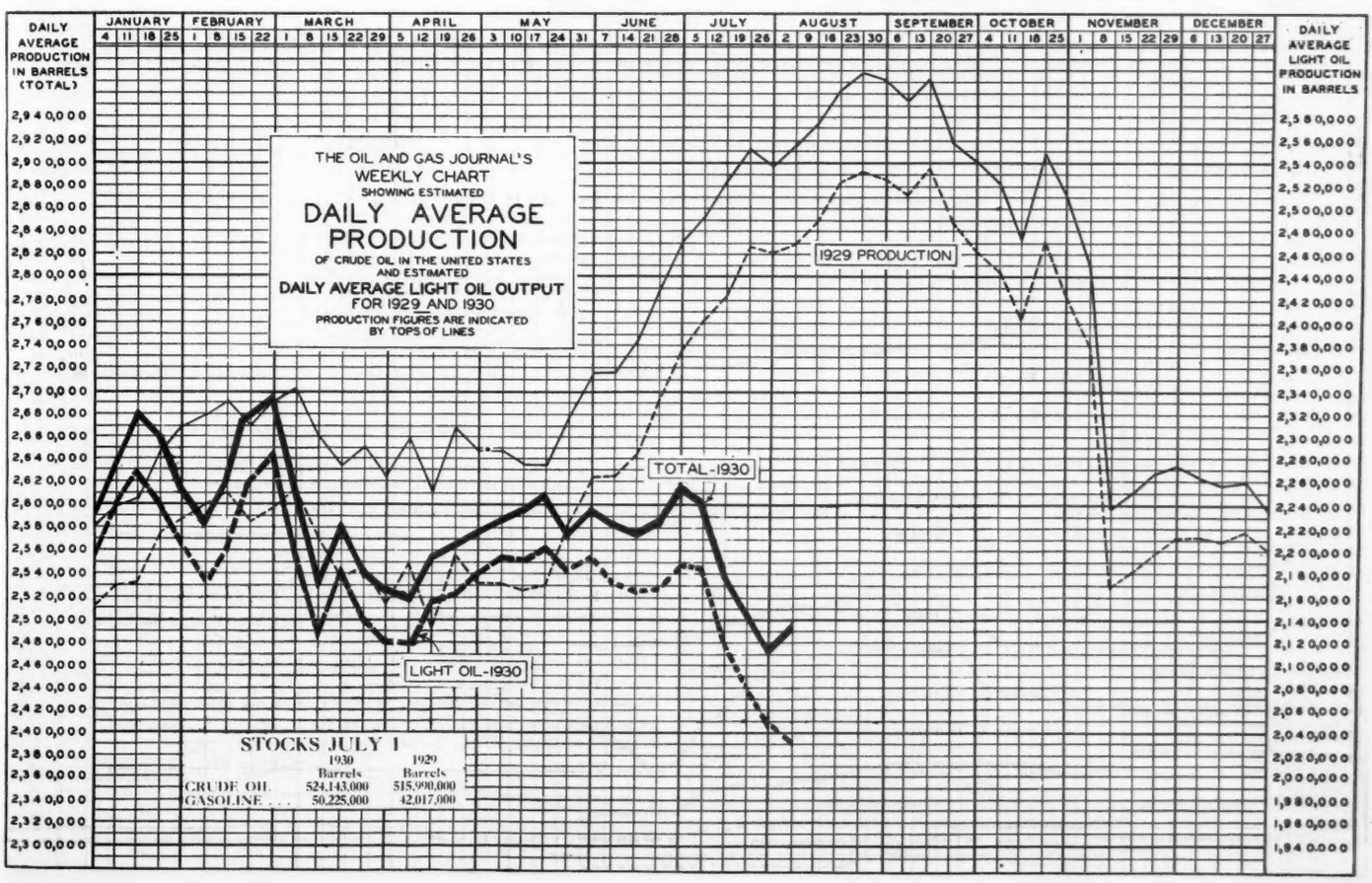
Much depends upon the refining industry. Gasoline requirements can be estimated very accurately and figures on the quantity of gasoline in storage are published each week. If refinery operations are so adjusted that gasoline stocks will be reduced during this period of maximum consumption, the industry will be in the best condition it has enjoyed for years.

PRODUCTION IN THE UNITED STATES

Estimated daily average production of light and heavy gravity oil in the United States for week ended August 2 and a comparison with the previous week follows:

	August 2		July 26	
	Light	Heavy	Light	Heavy
Oklahoma—				
Oklahoma City	100,385	.....	77,470	.....
St. Louis-Pearson	24,870	.....	27,165	.....
Seminole	131,395	.....	157,255	.....
Northern miscellaneous	235,970	.....	241,410	.....
Southern fields	61,385	.....	61,840	.....
Total Oklahoma	554,005	.....	565,140	.....
West Texas—				
Hendricks	73,145	.....	70,825	.....
Yates	105,850	.....	107,130	.....
Remainder	119,625	.....	118,317	.....
Total West Texas	298,620	.....	296,272	.....
North Louisiana	36,450	5,200	36,895	5,245
Arkansas	17,760	37,280	17,895	37,550
North Central Texas	125,968	.....	126,225	.....
Texas Panhandle	96,546	.....	96,009	.....
East Central Texas	41,960	.....	40,264	.....
Kansas	116,210	.....	116,945	.....
Total Mid-Continent area	1,287,519	42,480	1,295,645	42,795
Gulf Coast	.....	204,986	.....	203,918
Southwest Texas	.....	133,701	.....	95,906
Eastern	122,000	.....	127,000	.....
Rocky Mountain area	105,577	.....	106,485	.....
California—				
Santa Fe Springs	110,000	.....	111,000	.....
Long Beach	101,250	.....	101,500	.....
Huntington Beach	28,350	.....	28,350	.....
Elwood	42,000	.....	45,500	.....
Ventura Avenue	48,000	.....	48,250	.....
Seal Beach	20,500	.....	20,500	.....
Remainder of State	166,000	86,000	165,000	86,000
Total California	516,100	86,000	520,100	86,000
Total United States	2,031,196	467,167	2,049,230	428,619
Grand total	2,498,363		2,477,849	

Total Increase, 20,514 Bbls.; Light Oil Decrease, 18,034 Bbls.



Natural Gasolines Continue Advance

Smaller Supply and Increased Demand Restores 5-Cent Level on A Grades. No General Improvement in Refinery Market

By C. O. Willson

Natural gasolines continue to be the only product in the Oklahoma (Group 3) market which is showing consistent strength. With a strong demand, prices again advanced one-fourth cent and quotations the first of the week were firm at 5 cents for the A and AA grades and 4¾ cents for the remaining grades. Sales for delivery over the month were made above these prices on Monday and Tuesday indicating an expectation of continued strength in the market.

As explained in these columns last week the natural gasoline manufacturers are profiting from a decreased output and increased demand. The crude oil curtailment programs and the extremely hot weather has reduced the output in several areas. In a few cases companies which ordinarily have sufficient production at their own plants to take care of their refinery requirements, have found it necessary to supplement these regular shipments with spot purchases from other manufacturers. In the consuming end, the reduction of refinery gasoline storage has brought an increased demand for natural gasoline coming from many refiners in all parts of the country. Additional purchases have been made by coastal refiners with an increase in the coastwise movement to the East Coast refiners.

Prices on other products for the most part are unchanged except kerosenes which are fractionally lower. Most refiners have not changed their quotations on kerosene for several weeks but enough of the lower priced material has become available to become a factor in the general market.

Despite the optimistic reports of a few sellers it is impossible to note any improvement in the spot market for refinery gasolines. Several refiners unquestionably are in a better position due to a heavy demand and the curtailment of their plant output but other refiners are looking for business at prices in effect last week and in one or two cases at least, additional concessions in prices have been given. The movement, with consumption at the peak point of the year, is heavy and sellers are still hopeful from day to day that a definite improvement in prices will get under way.

Statistical Situation

The Bureau of Mines report covering refinery operations in United States for June which was released this week shows the statistical situation within the industry which is responsible for market conditions. The report for the Mid-Continent is summarized in the accompanying table covering gasoline, kerosene and fuel oil and gas oil with comparisons for May and June of last year.

In line with the general trend in other areas, Mid-Continent refiners ran less crude oil daily to their stills than in May or June of last year. This trend was reflected several weeks ago in a survey of The Oil and Gas Journal. Since June as shown in the American Petroleum Institute's weekly reports there has been a still greater reduction in crude runs to stills although the decreases have

(Continued on Page 156)

REFINED MARKET BAROMETER

Refined market quotations were fairly steady over the past week. With prices on most products at the low point of the year, refiners in most cases are endeavoring to prevent further reductions pending the close of a liquidation period in which excessive stocks are being sold and current production curtailed. The fact that the domestic gasoline demand is now in the peak month of the year has not strengthened the refinery tank car market. The refinery movement of this product is heavy but prices generally have been lowered when any changes were made. Contrary to the trend in the refinery market, natural gasoline prices have advanced both in the Mid-Continent and California. No important changes were reported in fuel oil and gas oil with adequate supplies of both products. Kerosene prices continue to reflect a soft market. The lubricating list is fairly firm, particularly in the East Coast areas. More inquiries for wax.

Mid-Continent—Natural gasolines advance in all areas. Refinery gasolines unchanged. Kerosene weak. Industrial demand for fuel oil and gas oil slow. Lubricants weak.

East Coast—Prices unchanged. Price cutting continues in refinery gasolines. Firmer market for cylinder stocks. More inquiries for wax. Other products unchanged.

Pennsylvania—Market fairly firm except kerosenes which are weak.

Chicago—Heavy movement of gasoline with prices weak. Kerosene slow. Distillate market more active. Industrial fuels quiet.

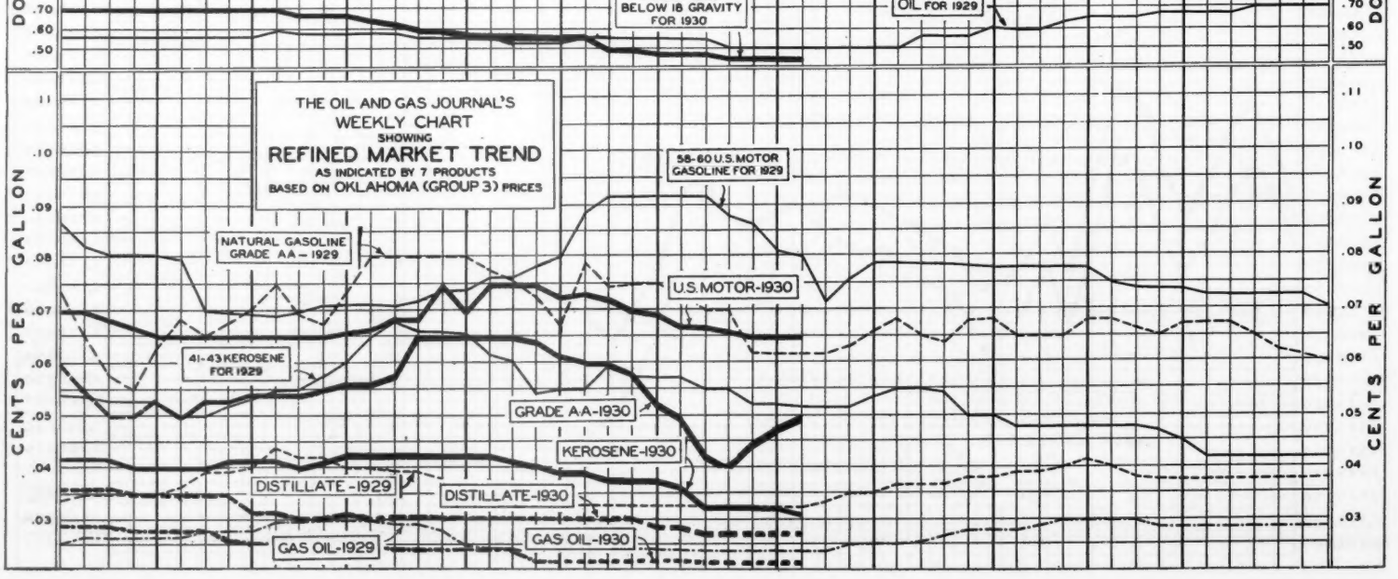
Gulf Coast—Prices steady. Active competition in gasoline market continues.

California—Natural gasoline prices higher. Other products unchanged.

MID-CONTINENT REFINERY OPERATIONS
(Data in thousands of barrels)

	Crude oil runs to stills			Gasoline output			Gasoline stocks*			Kerosene production			Kerosene stocks*			Fuel oil and gas oil output			Fuel oil and gas oil stocks*		
	June, 1930	May, 1930	June, 1929	June, 1930	May, 1930	June, 1929	June, 1930	May, 1930	June, 1929	June, 1930	May, 1930	June, 1929	June, 1930	May, 1930	June, 1929	June, 1930	May, 1930	June, 1929	June, 1930	May, 1930	June, 1929
Oklahoma-Kansas	9,747	10,589	9,904	5,555	5,835	5,266	5,170	5,475	5,205	735	853	924	858	826	689	2,178	3,252	3,201	5,381	5,016	6,164
Texas*	5,356	5,648	5,248	2,457	2,554	1,979	1,978	1,847	1,106	265	282	259	134	138	134	2,380	2,868	2,735	3,561	3,523	3,359
Louisiana-Arkansas	1,622	1,770	2,132	625	680	705	407	412	320	75	72	48	43	34	17	711	1,017	1,207	868	953	1,436
Total	16,725	18,007	17,284	8,637	9,069	7,950	7,555	7,734	6,631	1,075	1,207	1,231	1,035	998	840	5,269	7,137	7,143	9,810	9,492	10,959

*Stocks end of month.



Texas Proration Seems a Step Nearer

Special Meeting in Austin This Week Expected to Be Followed by State-Wide Order. Big Meeting Held Last Week

By L. E. Bredberg
Fort Worth Bureau, The Oil and Gas Journal

FORT WORTH, Tex., Aug. 4.—Solution of the overproduction problem in Texas is a step nearer as a result of the largely attended meeting of oil men and members of the State Railroad Commission held in Austin last Wednesday. A special meeting of the commission will be held August 8 to consider three objections raised to the report submitted by the oil men at last Wednesday's session and shortly thereafter it is believed statewide proration will be made effective by the railroad commission. The report of the committee of oil men, submitted at the session last week, recommended a reduction of 125,000 bbls. daily from the daily average output of the State at the end of June. This report is published as a separate article, starting on this page.

The meeting last Wednesday was for the purpose of considering best means of enforcing the recently enacted pipe line law and was called by the State Railroad Commission. More than 200 oil men and royalty owners attended the session.

At the opening of the meeting John E. Kilgore of Wichita Falls read the report mentioned above which was drawn up and submitted by 31 men who met on the day previous to the meeting for the express purpose of drawing up a report of the general situation in Texas, how each pool should be cut and to what amount curtailed.

Penn Outlines Situation

Robert R. Penn, president of the Penn Oil Co., Dallas, Tex., and chairman of the committee which drew up this report, supplemented it orally, telling how the oil situation in Texas was becoming more serious as time went on, and that the "blow up" of proration in Darst Creek, and the possible collapse of proration in Howard-Glasscock Counties, were two examples of what might take place in the other prorated fields of Texas, throwing the industry into a chaotic state, and causing it to fall to the level of 1921 when oil sold for 10 cents per barrel in Texas. "We may expect terrific slashes in prices unless old and new fields are curtailed," said Mr. Penn, "and unless the railroad commission takes action."

It was stated new processes of refining caused certain grades of oil to be less in demand and others to be in greater demand as in North Texas, where oil has been less and less in demand and pipe line companies have been cutting their runs, and in South Texas where the demand is greater than the present daily production.

"The economic structure of the State is more or less dependent upon oil," Mr. Penn said, "and the major companies do not wish to see the independent producer exterminated, but a worse situation than the present will do this very thing, and if the pipe line law is a failure, find it out now, have the governor call the state legislature to make a law to help the oil situation, but if the present bill is adequate, test it and prove its value to the industry."

After Mr. Penn's supplementary talk, subchairmen of the various districts gave brief descriptions of their various producing areas, and how they viewed general proration, and expressed desires to co-operate with the railroad commission in reducing production to help stabilize the industry. J. H. Clark was the first subchairman to give a report, on the Panhandle district. He pointed out that his district had produced an average of 107,000 bbls. per day for the previous seven days, that 92 wells were drilling, which would have an estimated potential of 30,100 bbls. per day when completed within the next two weeks. The method of prorating the flush pools of his district was to be worked out by local committees which set to work on this plan July 28. A report is to be submitted within 10 days.

North Texas District

M. W. Blair of the North Texas district said his district has a daily average production of around 74,000 bbls., or 5.64 bbls. per well. The Prairie Pipe Line Co. recently made a cut in purchases of crude in this district and the Continental Pipe Line Co. has announced a 50 per cent cut taking effect August 1 in the Wichita Falls district. Mr. Blair said that his district was anxious to overcome any such practices as these, and to see a better form of curtailment set in motion. He also said that pipe line facilities in the Wichita Falls district are adequate for the present production, but that the demand for their crude is not, and consequently the purchasing companies have been cutting down in purchases in this district.

H. P. Evans gave the present status of the Ranger district, and stated that production for July had averaged around 55,700 bbls. per day, or an average of 5.17 bbls. per well. He remarked that he believed that a reduction could be made in production in his district, but that no well producing less than 6 bbls. per day should be cut, taking into consideration age of well, depth, condition and other production statistics.

E. A. Landreth, president of the Landreth Production Corp., Fort Worth, and Charles E. Yager, chief geologist of the Texas Pacific Coal & Oil Co., Fort Worth, gave statistics on West Texas fields, enumerating the producing wells in each county and pool, the amount of production per pool or county, and naming the pools under proration in this district, bringing out that the Hendricks Pool, Winkler County, has an allowance of 80,000 bbls. per day but can only produce 69,000 bbls.; and that the Yates Pool, Pecos County, is held to 100,000 bbls. per day, the best prorated field in the United States.

W. L. Todd, vice president of the Simms Oil Co., Dallas, gave a resume of the East Central Texas district which includes the Van Field.

J. P. Nash told of conditions in Southwest Texas, stating that the Shell Pipe Line Co. was giving temporary relief in the Salt Flats Field, and that a hearing was to be held by the railroad commission on August 6 to discuss conditions and possible proration of this field. David Donoghue supplemented Mr. Nash's description of this district.

P. C. Murphy was the last district subchairman to bring details of his district, the Gulf Coast.

Exceptions to Schedule

Two representatives, one from the Group No. 1 Oil Co., whose mapority of stock is owned by the Continental Oil Co., and of the Big Lake Oil Co., two owners of the Big Lake Field, Reagan County, in the West Texas district, voiced exceptions to the proration schedule as named in the survey which would curtail that field from 20,000 bbls. per day to 6,600 bbls. per day, or a reduction of 33⅓ per cent. Mr. Wharton, representative of the former company, asked for a special hearing on this field by the railroad commission, stating that the board of regents of the University of Texas, engineers and geologists of the university and of the companies operating in the field should meet to discuss the damage which might be caused if the high-pressure deep wells were shut in, intimating that such high-pressure wells could not be so controlled without damage. Another large producer in West Texas took exception to this matter of shutting in these wells and stated that other such wells were shut in all over the country and that wells in the Big Lake Field producing from the deep pay under high gas pressure could also be shut in and the field put under proration, and that if special hearings were granted to every area, state-wide proration would probably never be put into effect. Other producers took the floor to voice their opinions in regard to special hearings, saying that they believed the railroad commission to be fair in all its dealings, to be doing the best it possibly can, and that it should be given hearty co-operation in helping to make state-wide proration a success, and that special hearings should be dispensed with in order to expedite general proration.

E. P. Rice of Cisco, Tex., read resolutions from several different chambers of commerce of towns in the Ranger district, in which they asked that six counties of this district be separated from counties in which flush production wells and pools are making exceedingly high production; for instance, the Riggs Pool, Young County, which produces big wells. In the report submitted to the railroad commission, this county is carried under West Central Texas, in which Brown, Callahan, Coleman, Eastland, Jack, Palo Pinto, Shackelford, Stephens, Throckmorton, Haskell and Runnels Counties are also included.

Views of Independents

Claude Wild of the Independent Petroleum Association of Texas presented the views of the independent producers of the State, reading a report which asked that an investigation should be made to ascertain who is doing the excessive drilling, if there is any in the State, and also asked that an investigation be made into the importation of crude oil into the United States. It also asked that the railroad commission take great care in studying the report submitted, and in promulgating a general proration order.

C. W. Tomlinson of the Schermerhorn Oil Co. presented the situation of the Howard-Glasscock County pools, and thanked the railroad commission for its help in the proration of these fields for the past many months. He asked that the outlet submitted in the general report be given the area and nothing more, but that the producers in this area would be glad to receive that amount.

Don Emory of the Phillips Petroleum Co. expressed his confidence in this general meeting, and the railroad commis-

(Continued on Page 110)

PLAN TO EQUALIZE TEXAS CRUDE OUTPUT WITH REFINERY DEMAND

Following is the petition presented to the Railroad Commission of Texas by the committee of Texas producers of which Robert R. Penn of Dallas is chairman, asking for an order curtailing the production of crude oil in that State.

The opening paragraph of the petition says: "In view of the general situation which exists in the oil business in the State of Texas, which condition has existed for some period of time, and had become more aggravated by recent events; and at the request of your honorable body, representatives from the oil industry all over the State have endeavored to arrive at what the fundamental causes of the present situation are. . . . The report hereinafter contained suggests certain remedies which appear to these representatives to be necessary to alleviate the (overproduction) conditions as they exist. . . . We suggest that adequate rules and regulations be contained in the order to accomplish the following general outline of results:"

1. That a statewide curtailment of the amount of oil which may be produced within this State be effected for a period of ninety (90) days beginning August 1, 1930.

2. That the basis of such curtailment be defined specifically as to each field within this State, taking into consideration the various facts and circumstances within each separate field.

3. Since at your request a careful, detailed survey of the present situation has been made, and from such survey it is indicated that a reduction of 75,000 bbls. in daily production is now needed to meet the situation as it now exists; and since in the opinion of the Producers' Committees, which have been working on this survey, it is advisable to obtain not only the reduction necessary to balance demand, but an additional reduction of at least 50,000 bbls., bringing a total curtailment of approximately 125,000 bbls. below the daily average Texas production at the end of June, we recommend that the specific daily production from each field or district be reduced and limited during such 90-day period to the following specific amounts:

Field—	Present production as of July 19, 1930 (bbls.)	Daily permitted production during proration period (bbls.)
Panhandle (including Gray, Hutchinson, Moore, Carson, Potter and Wheeler Counties) (July 24, 1930)	96,450	80,000
North Central Texas (including Archer, Baylor, Clay, Cooke, Foard, Montague, Wichita and Wilbarger Counties)....	74,450	69,000
West Central Texas (including Brown, Callahan, Coleman, Eastland, Jack, Palo Pinto, Shackelford, Stephens, Throckmorton, Young, Haskell and Runnels Counties).	55,700	52,000
West Texas (including Crane, Upton, Crockett, Ector, Howard, Glasscock, Jones, Mitchell, Scurry, Reagan, Winkler, Pecos, Ward, Jones and Fisher Counties)....	293,950	276,350

In this district, since most of the fields are already either under proration, or are badly subject to water encroachment, we recommend that the production of Upton and Crane Counties, now totaling approximately 39,000 bbls. per day, be reduced by 33⅓ per cent, or 13,000 bbls.; and that the Big Lake Field in Reagan County, now producing 13,000 bbls. from an upper or sulphur pay, and 9,000 bbls. from an 8,500-foot pay, be reduced by 33⅓ per cent each, or 6,000 bbls. In connection with the deep pay mentioned in this field, it should be pointed out that there is an actual waste of valuable gas far out of proportion to the oil being produced, amounting to 10,000 cubic feet

(Continued on Page 150)

Further Decrease in Refinery Runs

Mid-Continent Operators Will Run 17,000 Bbls. Less Crude Oil Daily in August Than in July

By C. O. Willson

The trend toward reduced crude oil runs to stills which got under way among Mid-Continent refiners late in May will continue in August despite the fact that it is the month of greatest gasoline consumption with maximum shipments from refineries.

According to a survey completed the first of the week Mid-Continent refiners (Oklahoma, Kansas, North, Central and West Texas, Arkansas and North Louisiana) will average 531,400 bbls. of crude oil to their stills in August, a decrease of 17,075 bbls. when compared with the average for July. These runs for August will be the lowest since 1927. In 1928 the August runs averaged 543,625 bbls. daily, and in August, 1929, 555,250 bbls.

The decline in crude oil runs to stills is a direct reflection of an unsatisfactory refined market in which gasoline and practically all other products are exceptionally low in price. Since May when the collapse in the gasoline market started, operators have realized that curtailment in plant operations was necessary in order to reduce inventories which became top heavy early in the year. The same situation applies to other products.

As shown in the accompanying table, several refiners in the six groups will run less oil to their stills in August than they did in July. Other operators who expected to increase their runs in August due to the seasonal increase in gasoline demand will continue to operate on the July basis.

All areas showed a decrease except Arkansas where the August runs will be practically the same as in July. West Texas has the largest decline totaling 10,200 bbls. brought about by the shutdown of two plants and a curtailment at several other plants.

MID-CONTINENT REFINERY OPERATIONS

(Data in barrels)

Districts—	No. of plants Aug. 1	Daily crude cap. (bbls.)	Daily crack. cap. (bbls.)	Plants oper. Aug. 1	Runs to stills Aug. 1	Plants oper. July 1	Runs to stills July 1	Daily dec. Aug. 1
Arkansas	9	45,300	16,750	9	26,400	9	26,100	*300
Kansas	15	140,500	77,400	15	88,100	15	89,250	1,150
North Louisiana	6	58,750	21,000	5	32,500	5	34,200	1,700
Oklahoma	47	318,300	117,050	42	202,350	41	206,325	3,975
North and Central Texas	38	179,900	34,750	36	111,800	36	112,150	350
West Texas	31	150,800	44,700	24	70,250	27	80,450	10,200
Total	146	892,550	311,650	131	531,400	133	548,475	17,075

*Increase

Oklahoma

The reduction in Oklahoma runs for August will be small, most refiners reporting no changes in their runs.

For the first time in over a year a new plant is added to the Oklahoma list. The plant, which is located in the Oklahoma City Pool, started operating the first of the month. It is owned by the Black Gold Oil Co., and has an initial capacity of 1,500 bbls. daily.

The plant will skim the light end products from Oklahoma City crude oil and the bottoms will be refined into steam refined stocks.

No other plants are now operating in the Oklahoma City area although reports are heard from week to week that new plants will be built or old plants started up. The Gulf States Corp. of Tulsa, which took over what was formerly known as the Home Refining Co. plant, has made repairs. Provided satisfactory arrangements can be made in regard to a crude oil supply it is probable that the plant will start operating before the end of the month.

The taking over of the properties of the Homaokla Oil Co. by the Sunray Oil Co. of Tulsa has been completed and the Allen refinery is now operated under the name of the latter company.

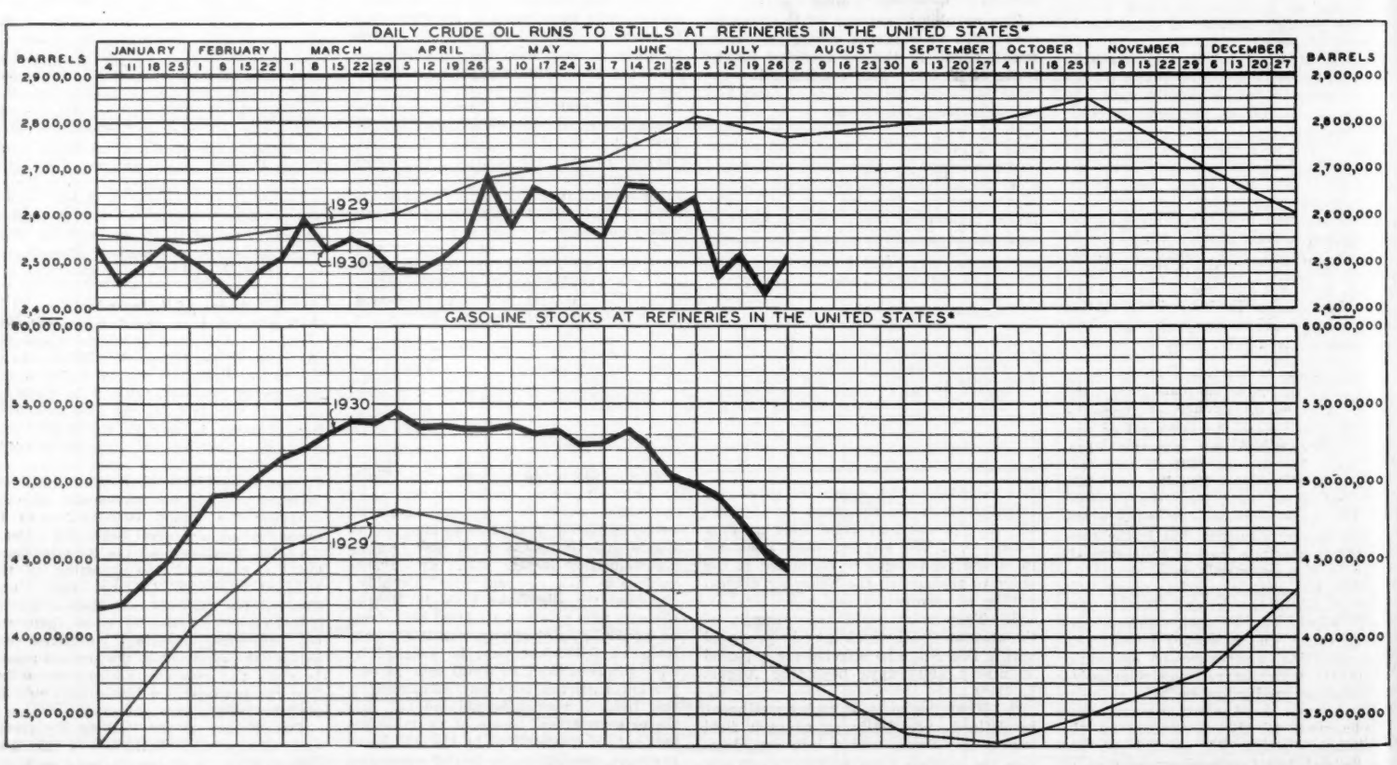
(Continued on Page 154)

AMERICAN PETROLEUM INSTITUTE WEEKLY REFINERY STATISTICS

The weekly report made to the American Petroleum Institute on refinery statistics—crude runs to stills, gasoline stocks and gas and fuel oil stocks in barrels—for the week ending August 2.

	Week ending August 2				Week ending July 26				Week ending January 4			
	(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)
East Coast	100.0	488,100	7,242,000	10,084,000	100.0	488,700	7,354,000	9,757,000	100.0	454,857	5,998,000	7,431,000
Appalachian	91.8	81,000	1,494,000	1,010,000	91.8	77,800	1,467,000	1,042,000	91.6	75,571	1,282,000	805,000
Indiana, Illinois, Kentucky	99.6	285,400	7,069,000	4,387,000	99.6	295,900	7,363,000	4,403,000	98.6	289,800	5,483,000	3,505,000
Oklahoma, Kansas, Missouri	89.9	261,600	3,671,000	4,730,000	89.8	281,600	3,837,000	4,671,000	87.7	263,428	3,604,000	3,277,000
Texas	90.4	561,600	6,737,000	10,141,000	90.4	582,600	6,476,000	10,182,000	90.7	539,857	6,590,000	13,757,000
Louisiana and Arkansas	96.8	157,900	1,741,000	1,938,000	96.8	164,900	1,977,000	1,927,000	96.8	160,000	2,161,000	4,499,000
Rocky Mountain	93.6	52,100	2,400,000	1,204,000	93.6	54,800	2,481,000	1,204,000	93.3	41,614	2,273,000	973,000
California	99.3	569,000	13,746,000	106,147,000	99.3	572,300	13,796,000	106,083,000	99.3	642,857	14,826,000	109,770,000
Total United States	95.7	2,456,700	44,100,000	139,641,000	95.7	2,518,600	44,751,000	139,269,000	95.4	2,468,285	42,217,000	144,017,000
Texas Gulf Coast	100.0	418,000	5,484,000	7,049,000	100.0	429,900	5,253,000	7,155,000	100.0	429,585	5,579,000	10,792,000
Louisiana Gulf Coast	100.0	112,400	1,382,000	1,098,000	100.0	106,100	1,589,000	1,068,000	100.0	108,514	1,877,000	3,813,000

(1) Per cent refinery capacity represented. (2) Daily crude runs to stills. (3) Gasoline stocks. (4) Gas and fuel oil stocks.



*Data for 1930 based on weekly reports of the American Petroleum Institute. Data for 1929 derived from monthly reports of the Bureau of Mines, Department of Commerce. Figures for last week not shown in graph but are included in above tables.

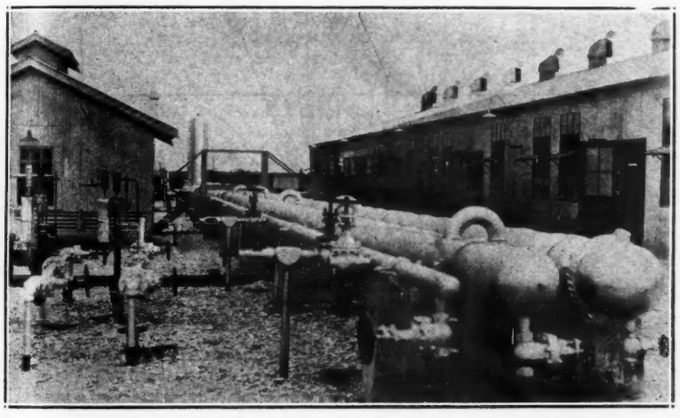
Repressuring Successful at Sugarland

Efficient Operation of This Gulf Coast Pool by Humble Oil & Refining Co. Reduces Net Gas-Oil Ratio to 49 Feet

By Nell Williams

HOUSTON, Tex., Aug. 4.—There are three main factors which concern the modern oil producer; namely, conservation of the natural resources, lower lifting costs and an increase in the ultimate recovery. These factors, or objectives, have governed the Humble Oil & Refining Co. in the work it has done and is doing along repressuring lines, not only in the restoration of pressure to depleted sands but also in the adaptation of the same principle in the flush fields at Sugarland and Raccoon Bend.

This article is chiefly concerned with what has been accomplished by the Humble Oil & Refining Co. along this line at Sugarland (DeWalt), a Gulf Coast salt dome field. The results at this field have been so satisfactory that a similar program but on a larger scale is being started at Raccoon Bend. The latter field is not a typical Gulf Coast salt dome but it is similar in general characteristics to fields in the Gulf Coast area. The program at Raccoon Bend will involve the return of gas to two producing horizons as against one at Sugarland.



Close-up of header system at Sugarland compressor station.

Sugarland is one of the few salt dome fields in which any repressuring has been attempted and it is one of the few fields in the country in which repressuring, or perhaps a better expression, maintenance of pressure, has been undertaken in what might be termed their early or flush stages. From both angles the work at this field is of particular interest.

Almost a Perfect Dome

Salt dome fields in the past have been looked upon as too broken or irregular in structure to provide a basis for carrying out any project for the return of gas to the sands, and many have lacked in gas. Sugarland, which is a perfect dome, has presented ideal conditions for this work. The field is producing from an almost uniform horizon immediately overlying the salt at a depth ranging from 3,400 to 3,700 feet. At the apex, or high part of the dome, within a radius of approximately 300 feet the top of the producing sand is comparatively free of oil. Wells in this area are suitable for key or injection wells. Outwardly from this area on all sides the producing area dips gradually to the edges.

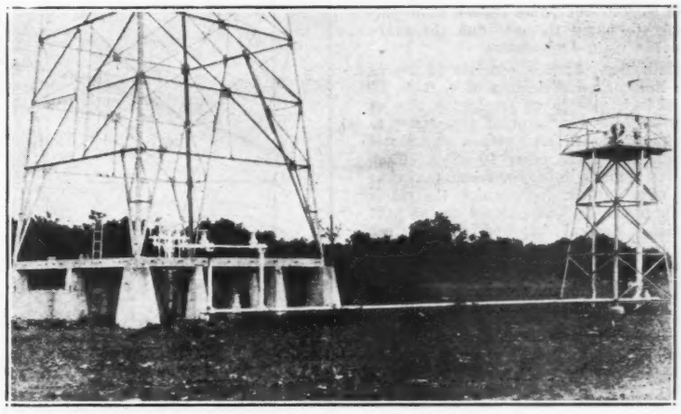
From the beginning Sugarland has been developed and produced systematically and conservatively. Being controlled in its entirety by one company, drilling has been carried on with a view toward proving up the producing area with as few tests as necessary and producing has been limited to the minimum requirements as consistent with practical and economical operation. Although it is 27 months old, the field, by reason of its regulated production, still is considered in its flush stage.

As far as development is concerned, the producing area overlying the dome virtually has been defined by the 67 tests drilled, the outermost circle of wells being such as to indicate the edge has been reached. Thus, the future life of the field hinges on the resources which have been kept in the reservoir, the proper utilization of the natural gas energy available, not only as an agent in the lifting of the remaining oil but also in the checking of the water encroachment.

Flowing Methods

Flowing methods at Sugarland are designed with the objective of conserving the natural gas energy and utilizing it to the greatest advantage in the production of oil; that is, in lowering the gas oil ratio of the field, or in other words, the lessening of lifting costs. This has been accomplished by proper choking of all producing wells, by closing in entirely of high gas-oil ratio wells, and in otherwise limiting the production of the field to the point where each well is flowed with the least amount of gas per barrel of oil. In line with this the Sugarland Field never has been permitted to flow more than 12,000 bbls. daily although its estimated potential open flow capacity has been and now is considerably above that figure.

By the above practice, it has been possible at Sugarland to lower the gas-oil ratio of producing wells to less than 300 cubic feet of gas per barrel of oil produced. Closing in entirely of the comparatively high gas-oil ratio wells in the field has made possible the retention of more than 1,000,000,000 feet of gas which otherwise would have been produced and wasted. This gas, with the tremendous volume conserved and retained in the sands by proper regulation of the producing wells, is sufficient, at existing pressures, it is estimated, to recover at least 2,000,000 bbls. of oil by flowing.



Flowing well at Sugarland showing separator hook-up.

By putting into operation a pressure maintenance program, the field has gone a step further in the conservation of natural gas energy by returning to the reservoir all available gas produced with the oil. In doing this there is a further reduction in the gas-oil ratio equivalent to the difference between the total gas produced and that returned to the sand. At present, this difference, or net gas-oil ratio at Sugarland amounts to 49 feet per barrel.

Three Key Wells

Gas at Sugarland is being injected into three key wells, Nos. 3 Camp, 6 Brazos Farms, and No. 1 Nelson, all located at the top of the structure as indicated in an accompanying map. By returning the gas to the reservoir at this point the usual order of production of a Gulf Coast field is being reversed. In customary salt dome production procedure the gas pressure head is eliminated in early stages of the field leaving wells to be flowed by hydrostatic pressure and to be put on the pump with water encroachment restricting the oil recovery and increasing lifting costs. Theoretically, there never will be any need of pumping at Sugarland, and in the end, when all the oil possible is recovered, the structure will remain virtually a dry gas reservoir. It is anticipated that the conservation and return of the gas to the sand, maintaining a nearly original pressure, will hold back the intrusion of water until all the oil is recovered and until drainage of the remaining gas reserve is started.

Some experiments have been made along this line to determine if the pressures of the field are fairly evenly distributed and to determine if the induction of the gas holds back the water. For this purpose No. 5 Sugarland (see accompanying map) was selected. The latter took gas at the rate of 300,000 feet daily at a pressure of 1,330 pounds. This was found to be the peak rate of induction without raising the header pressure above the normal operating pressure. As the induction pressure on this well indicated the reservoir pressure was fairly evenly distributed it was decided to disregard the effect of induced gas on water encroachment and continue with the original program of the three key wells, previously mentioned, on top the structure. It was the opinion that with reservoir pressure more or less evenly distributed water encroachment would be held on a level plane.

The permanent repressuring system at Sugarland has been in operation only since April 2, 1930. Since that time the plant has handled the entire output of the field except for a few minor shutdowns. Previous to that for a period of two months a temporary experimental plant was in operation, the data obtained from that being utilized in the installation and operation of the permanent system.

Repressuring Plant

The new plant has a capacity of approximately 4,440,000 feet of gas daily consisting of six low-stage and four high-stage compressors. The six low-stage compressors are 100 horsepower Clark machines equipped with 8½-inch cylinders capable of boosting daily 740,000 feet of gas each from 50 to 400 pounds. Each of the high-stage machines is equipped with 4½-inch cylinders capable of boosting 1,110,000 feet of gas daily from the low-stage machines from 400 to 2,000 pounds.

The gas for the plant is drawn from a low-pressure field gathering system with a capacity ample to take care of all future requirements for fuel and re-

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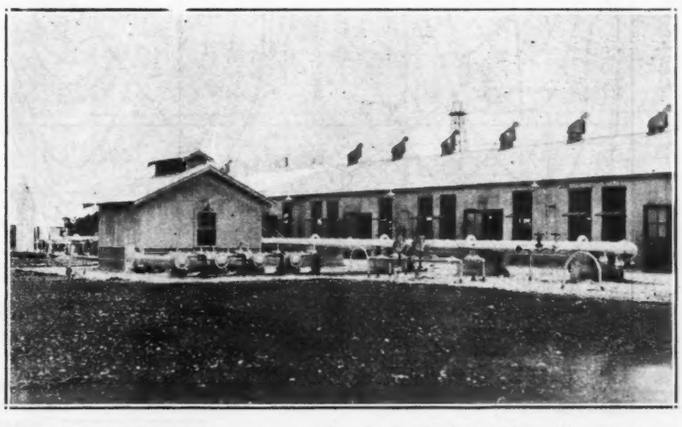

General view of Sugarland compressor station showing headers, with scrubber at extreme left, and intercoolers in center foreground. The small building behind the intercoolers, houses the drip for the condensate from the gas cooling operation.

Design of Gravity Gathering Systems

Proper Planning Will Permit Operation Over Long Period of Years at Low Over-All Cost Per Barrel of Oil Handled

By Paul L. Guarin
Chief Gauger, Shell Petroleum Corp., Tulsa

All pipe line systems are divided into main lines and gathering lines. Entirely different principles are applied in both the construction and the operation of each classification. Main lines serve to transport the oil cross-country from the oil fields to the refineries. Gathering lines serve to gather the oil from many producing leases in any one oil pool and concentrate it in large steel storage tanks. These tanks are located near a main line pump station built purposely to pump the oil from the tanks into the main line system.

Main line practice consists in laying one line, or parallel lines of 4, 6, 8, 10 or 12-inch pipe in as straight a line as possible from the point of acceptance to the point of delivery, with a pump station located about every 40 miles. Each station pumps into receiving tanks at the next station, from which the oil is again picked up and pumped to the next station. Several hundred pounds per square inch pressure is usually maintained on the pumps. Horizontal duplex and triplex single-acting plunger pumps of from 4-inch to 6½-inch bore and of from 18-inch to 36-inch stroke driven by Diesel oil engines are the most commonly used. However, a few of the newer installations have been made with electric motor driven multistage centrifugal pumps.

Gathering line practice involves many factors not encountered in main line practice. While the investment in gathering lines is not nearly so great as the huge investments in the main line systems, nevertheless the possibility for losses accruing from numerous sources not encountered in the main line systems are far greater and, therefore, the importance of the proper installation of the gathering lines and the method of efficiently operating them cannot be stressed too strongly.

Need for Proper Planning

A well-planned gathering system can be operated over a period of many years at a low over-all cost per barrel of oil handled through it, and, on the other hand, a poorly planned system can be installed that would effect possibly a big saving in initial investment, but over a period of years would prove very expensive to operate and a continuous source of trouble. Unfortunately, when planning a gathering system one is usually handicapped by a lack of reliable and essential information as to the probable future requirements the system will have to meet. Such essential information is not readily available because, usually at the time it is decided to lay a pipe line to a new oil pool, there are only a few wells actually producing and the size of the pool has not been definitely established. Further drilling might prove the productive limits of the field to be confined to a small area in the immediate vicinity of the discovery well, but, on the other hand, it might develop into a large pool covering several thousand acres. Nevertheless, the locating of the pipe line pump station and adjoining site for storage tanks, in proper respect to the fully developed field, becomes an immediate necessity. Upon the correctness of the judgment exercised in making this location depends, to a large extent, the degree of success obtainable in building an efficient gathering line system to serve the needs of the fully developed field for the reasons that, in the large majority of cases, the most efficient gathering system is one that conducts the oil from the various leases served to the pipe line storage tanks by gravity and that the suction pump used in connection with such gravity gathering lines is most satisfactorily located in the pipe line pump station building where it can be most economically operated. Taking into consideration these two factors, it becomes apparent that the most desirable location for the pipe line pump station and adjoining storage tanks is a low spot to which the oil from the several leases would naturally drain.

The first step in planning a new gathering system should be to ascertain, as accurately as possible, the probable producing limits of the new field. This is a problem relating strictly to geology

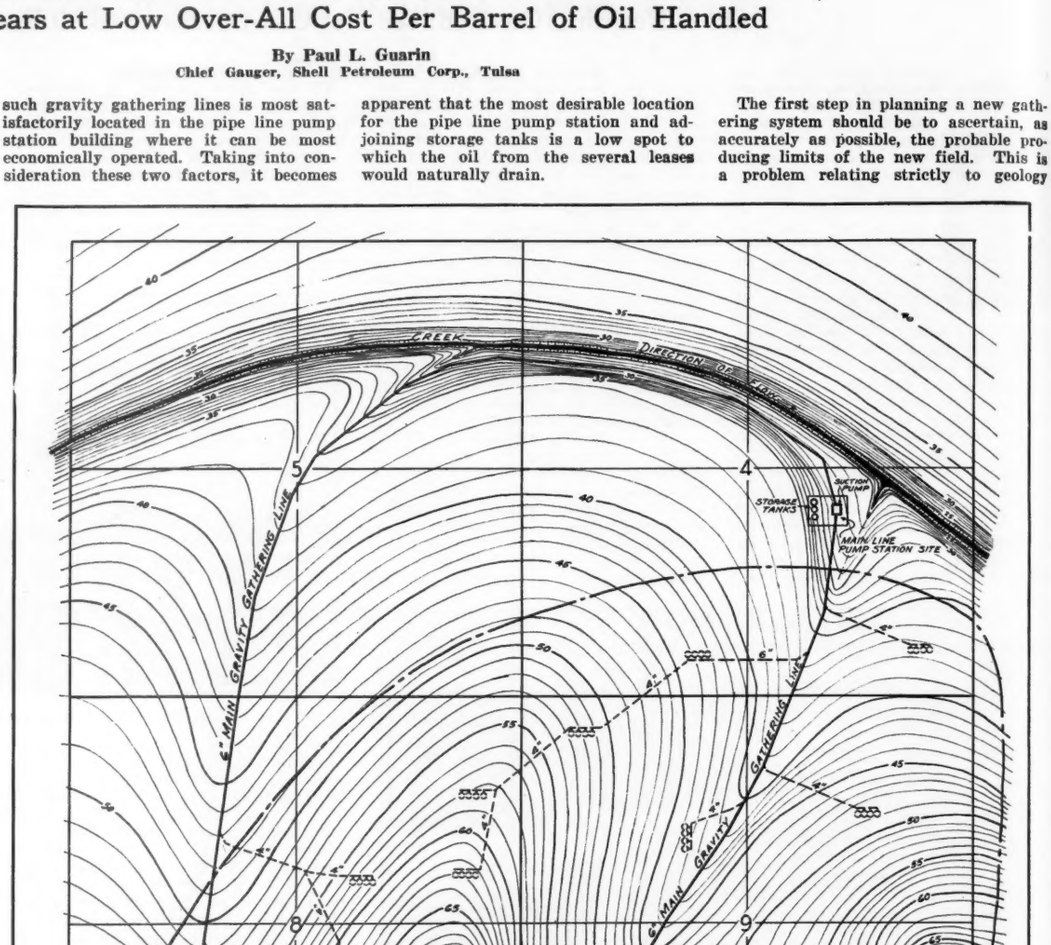

FIGURE (1)

and the information needed can best be furnished by someone well informed on the geology of the area in question. Usually such information is available to the larger pipe line companies through the geological departments of their affiliated companies, but, in any event a serious effort should be made to obtain expert advice on the matter, even though it might be rather vague, as it will certainly prove more reliable than a mere guess which would be the only alternative.

Having fixed the probable producing limits of the new field, the next step should be to consult the proper authorities of the affiliated purchasing company with a view to determining from what leases within the confinements of probable productive limits of the new field they might wish to purchase oil. Consequently some idea is gained as to what portions of the field it will probably be required to extend the gathering lines. Equally important is information gained regarding leases to which it is unlikely that it will ever be required to make connection, because such leases might be located unfavorably to an otherwise favorable and convenient main line pump station site, in which case they can and should be disregarded.

Topographical Surveys

With the information now available it is possible to define the area the gathering lines will most likely have to serve. An accurate topographical survey should be then made to include all of this area and as much additional territory as deemed advisable. A contour map, such as shown in Figures 1 and 2 should be prepared with contours at 1-foot intervals.

Upon the contour map is plotted the existing tank batteries on leases to which it is required to make immediate connection and also the probable location of tank batteries on undeveloped leases to which it will possibly be required to extend the gathering lines in the future. The present tank batteries are indicated by full lines and the future batteries by dotted lines. It is now possible to lay out a tentative system of gravity gathering lines to serve all of these leases. In doing this the first step should be to determine the general direction of natural drainage of the area under consideration and tentatively locate the main line pump station downstream in the direction of natural drainage in the lowest spot possible. The next step should be to determine the axes of any hills, hillocks, knolls, or local high places within the area to be served. As a general rule, main gravity gathering lines should be laid around the base of hills and hillocks and at all times be kept on as low ground as possible. Lease tank batteries located on the top or sides of such hills or hillocks should be connected into the main gathering system by means of feeder lines, usually of smaller size pipe than the main gathering line. It is rarely possible to serve an entire field with just one main gathering line. Usually two or more main gathering lines are required with perhaps several branches to each. One of the most common errors in laying out a gravity gathering system is to allow the main gravity lines, or branches to such main lines, to be laid up the side of a hill or knoll in order to save pipe, because it later may become necessary to extend the line to another lease of lower elevation. When this happens it is either necessary to pump the oil from the low lease or lay another branch of the main line along the proper route. If the main and branch gravity lines are kept on the lowest ground possible it is always possible to extend them upstream and make feeder line connections to leases located on ground having the same or higher elevation.

These different points are illustrated on the contour map, Figure 1, which shows an oil field and crude gathering system. This particular system is planned in the manner discussed, when the wells marked X on Leases A and B are the only wells actually producing oil at the time. The main line pump station and the gathering lines shown in full lines are immediately installed and later, as the field is developed, extensions to the gathering system are made according to the plan as shown by dotted lines. This gathering system will handle the oil from all the leases to which it is connected entirely by gravity.

Occasionally a condition is encountered where a divided or axis of a hill crosses the oil field so that the field has two directions of natural drainage and it is impossible to gravitate oil from leases located on one side of the divide to the main line pump station located on the other side. Contour map, Figure 2, illustrates such a condition. In this case the main line pump station and the main gathering system should be located on the side of the divide on which majority of the leases to which it is required to make connection are located. The gravity gathering system on the main line station side of the divide is laid out as before, as described and illustrated in Figure 1 with the main gravity gathering lines leading to the suction pump located at the main line pump station. On the other side of the divide another gravity gathering system is laid out with the main gravity gathering lines leading to another suction pump located in a low spot in the same manner as the main line pump station was located. No storage tanks are located at this suction pump station, but a separate discharge line of either 4-inch or 6-inch size is laid in as straight a line as possible from this pump to the storage tanks located at the main line station.

Cause of Air Pockets

One of the most troublesome features of most gravity gathering lines is the accumulation of air in the high places of the lines. As we all know, when this occurs the discharge of the line is greatly diminished. Theoretically, and sometimes actually, it is possible to lay the gravity lines low enough so that there will be no high places in which air can accumulate and under such conditions, as illustrated by Figure 3, no effort need be exercised to shut off the lease tanks before they go on air, or other-

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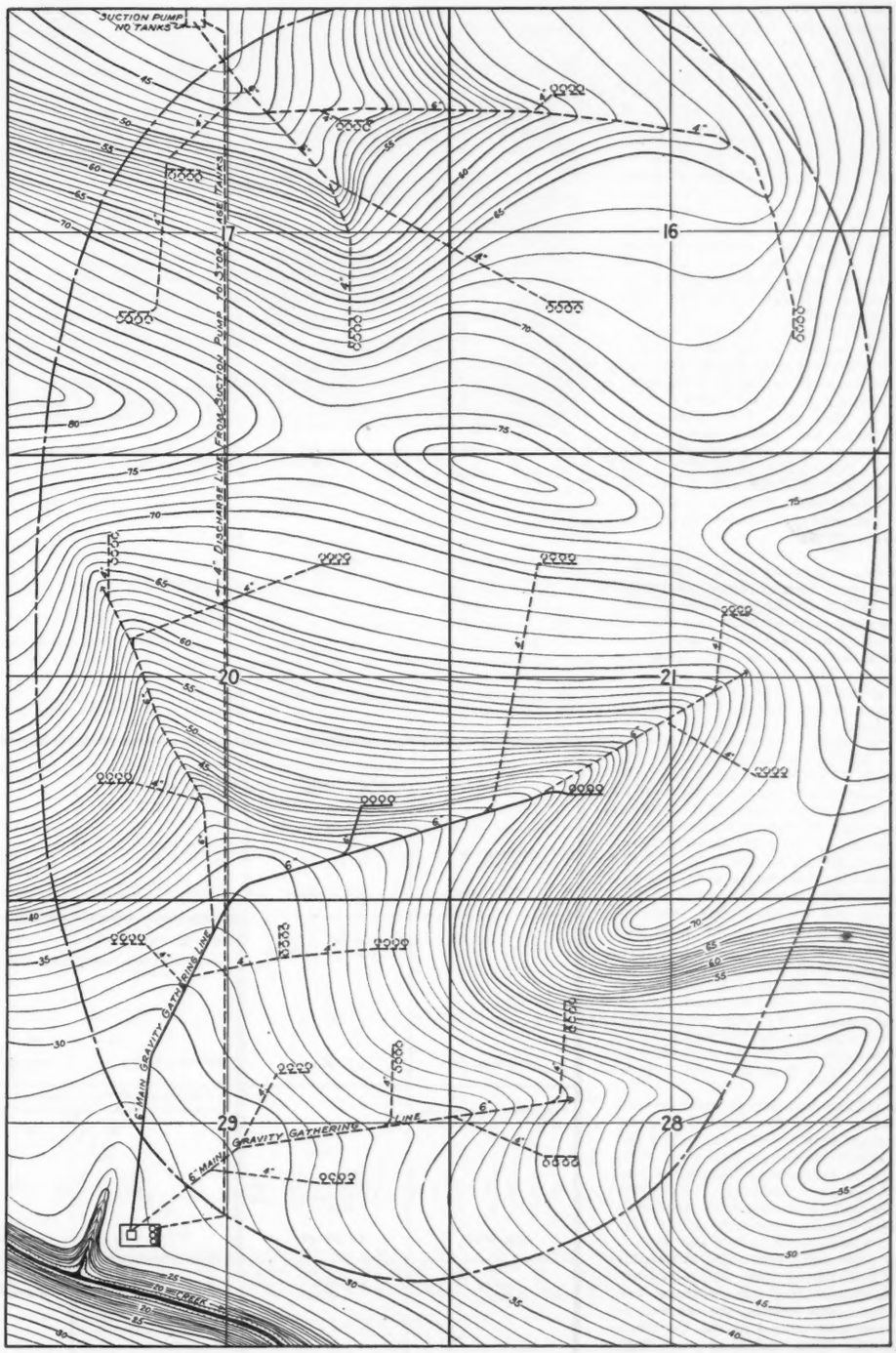


FIGURE (2)

Unitization Receives Practical Test

Interests in 640-Acre Block Join Together to Develop Area Under Guidance of Reiter-Foster Oil Corp. and Prairie Oil & Gas Co.

By L. G. E. Bignell
Petroleum Engineering Editor

The theory of unit operation of oil pools has been discussed quite fully and several examples of this type of operation have been described, but as this is still new in the petroleum industry it seems worth while to add to the literature on the subject all experiments along these lines so that the industry may learn what is actually taking place and thereby gain confidence in this plan of oil development and production.

The deep pools of Garber, Tonkawa, Logan County, Otoe and Watchorn in Oklahoma have indicated the possibilities of production from deeply buried Wilcox formations and when a new structure was indicated by surface work in northwest Payne and southwest Noble Counties it was only logical that the geologists and production men for the various companies should desire to make tests to develop it.

To spread the costs of such prospecting it was suggested by the Reiter-Foster Corp. that a community block be formed to cover 640 acres of land in the south half of Section 5 and the north half of Section 8, Township 19n, Range 1w. This acreage was pooled and a unit formed known as the Orlando Pool and the Reiter-Foster Corp. held a 31¼ per cent interest, with Prairie Oil & Gas Co. owning 25 per cent; Twin State Oil Co., 25 per cent, and the Continental Oil Co., 18¾ per cent.

When the Reiter-Foster Oil Corp. formed this community block in 1928 the first test was located upon what was then thought to be the top of the subsurface structure and beneath this high it was hoped that a section of the Wilcox formation would be found that would be productive. This theory was agreed in by the geologists of the other participating companies and with this in mind the Reiter-Foster Oil Corp. officials sponsored the pooling agreement and geologists for all the companies chose the No. 1 Watkins, C SW SE, Section 5-19n-1w, as the location for the first test well.

Upon completion of the No. 1 Watkins the next location was made to the southwest in C NE NW, Section 8-19n-1w, and is known as No. 1 T. Finnell, and these two operations were directed by the Reiter-Foster Oil Corp. This pooling or unit agreement was completed in December, 1928, and the first well started in January, 1929.

Prairie Took Over Operations

On May 1 of this year the Prairie Oil & Gas Co. took over the operation of this community block and have supervised the completion of the two most recently completed wells in this district known as No. 1 Rule and No. 2 Rosa Finnell.

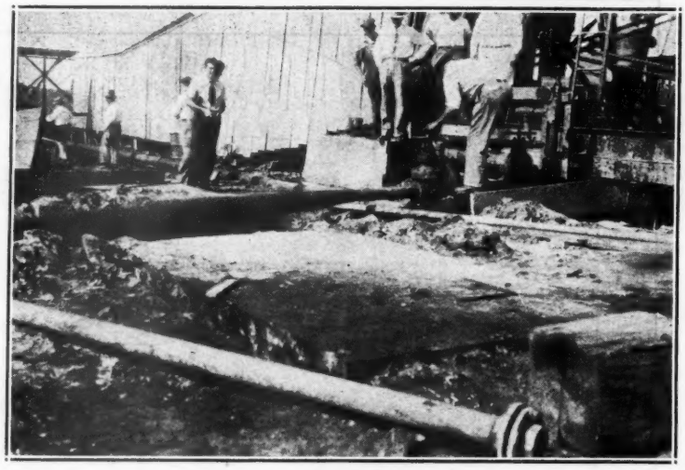
This change was agreed upon because the Prairie Oil & Gas Co. has a larger organization both in office and field and are in better position to take care of all details such as securing samples of cuttings frequently, studying and logging them, as well as attending to the details of record keeping necessary to the handling of a community test of this kind.

This area has been quite thoroughly worked with every type of geophysical instrument including magnetometer, torsion balance and seismograph, as well as two blocks core drilled by the Continental Oil Co. This geological work indicates noses and closed highs with rather deep dipping west flanks.

The community block lies in the extreme northwest corner of Payne County, Oklahoma, and is about 10 miles south of Perry and 15 miles west of Stillwater.

The first well drilled in the Orlando area, as it is locally known, was started in the spring of 1926 and carried as No. 1 Kinnaman. It is located in the SW cor. of Section 4-19n-1w. This well is started on a surface structure and was drilled with rotary tools to a depth of 3,302 feet with oil showings at 2,416-18, 3,059-61 and from 3,088-3,100 feet.

The hole from 3,302 feet was drilled with standard tools to a total depth of 5,002 feet and other oil showings were had at 4,280-90 feet and in the Misener dolomite at 4,775-85 feet and water in the Simpson sand. The well was drilled into the Wilcox sand with a hole full of water but no showing of oil. It was then plugged back to the Misener dolomite at 4,783 feet and had an initial production of 80 bbls. per day.



Oil flowing into pits at rate of 132 bbls. per hour from Orlando community block No. 1 Rule well, Section 8-19n-1w.

The well was completed in July, 1926, and largely on this showing was the community pooling of the 640 acres just west of it based. Since completion the production records of the Reiter-Foster Oil Corp. show that No. 1 Kinnaman has produced for them, with the one-eighth royalty deducted, as follows:

1926	4,094.47 bbls.
1927	12,517.82 bbls.
1928	15,420.88 bbls.
1929	10,636.02 bbls.
To July 1, 1930	2,849.87 bbls.
Total	45,519.06 bbls.

First Community Well

After forming the community block the Reiter-Foster Oil Corp. conducted the operations for drilling the first test known as No. 1 Watkins in the C SW SW of Section 5-19n-1w, and the well was started in January, 1929.

It was completed on July 15, 1929, and was very carefully drilled and all sands cored that might be productive of oil. Showings were found at 2,304-25 feet, 3,150-62 feet, 3,702-15 feet, 4,614-20 feet and in the Misener dolomite at 4,825-42 feet. Casing was set on the Misener dolomite and the well filled up and made a flow upon being deepened to 4,835 feet.

Tankage was erected to handle the oil and the well drilled to 4,842 feet and it made 60 bbls. the first 15 minutes of flow but gradually diminished to about 100 bbls. daily.

The well was then deepened to the lower Simpson sand in an attempt to reach the Arbuckle lime, to a total depth of 5,335 feet, and found water in both the upper Simpson and the Wilcox sands.

The well was then plugged back to the Misener dolomite and is now pumping 55 bbls. daily from that formation.

Second Test Well

In this test the Viola formation was found 35 feet lower than in the No. 1 Kinnaman well to the east of it and in a consultation the geologists for the various interests decided to drill the next well in the C NE NW, Section 8, which was the southwest diagonal 40 acres from the No. 1 Watkins well. This second well is known as No. 1 T. Finnell and it was started on December 3, 1929, and completed April 16, 1930.

From the start this well has a more encouraging showing than the well in Section 5. Oil was encountered at 1,800-10 feet, 2,140-50 feet, 2,710-20 feet, 4,312-32 feet and a good showing at 4,683-4,701 feet.

The casing was set on the Misener formation at 4,830 feet and upon drilling to 4,837 feet the well started flowing at the rate of 75 bbls. per hour. The Misener formation in this well is a pure quartz sand, while in the other two wells described it was a dolomite.

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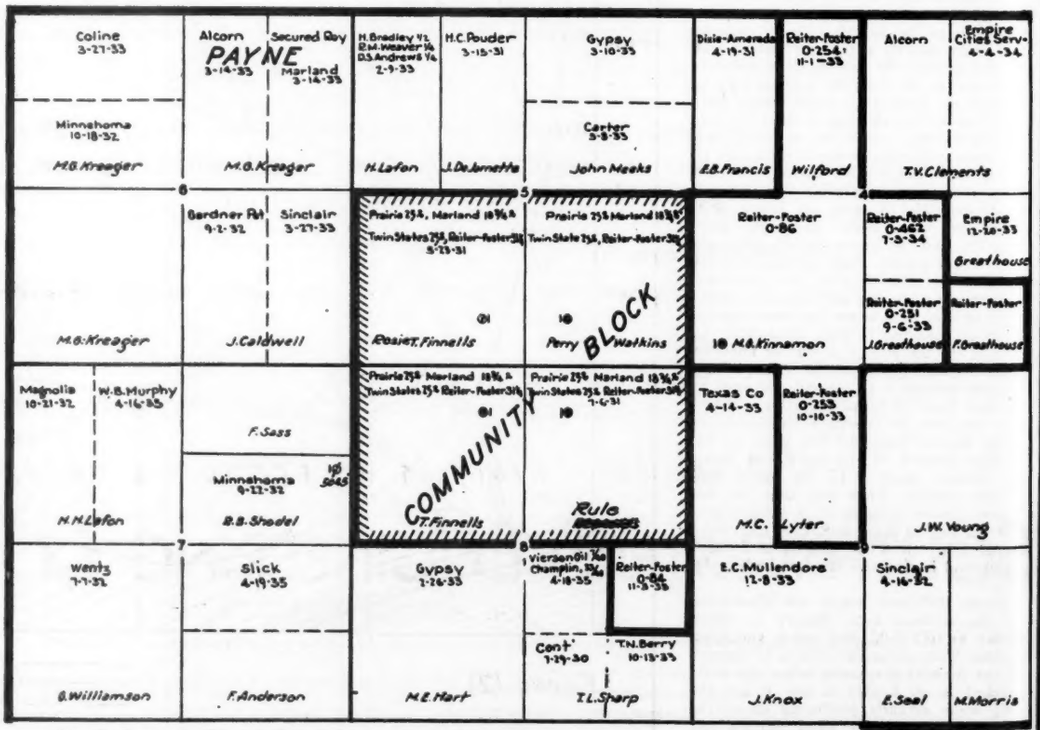
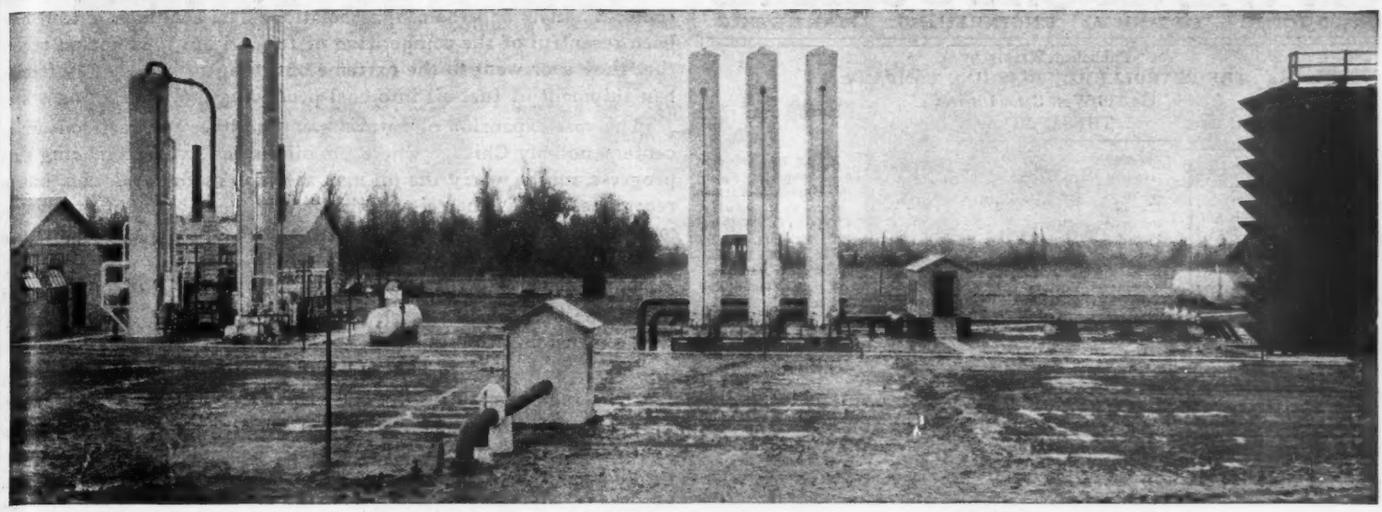


Orlando Community Block in S half, Section 5, and N half, Section 8, Township 19n, Range 1w, Payne County, Oklahoma.



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WHEN INDUSTRIES COMPETE

The organized miners of Illinois and the State Coal Association claiming to be composed of "chambers of commerce, Rotary clubs Kiwanis clubs, Lions clubs and other civic, business and labor organizations," have made formal protest to the Illinois Commerce Commission against the introduction of natural gas throughout central Illinois by a proposed pipe line.

This recalls the fulminations of Alabama organizations in a similar case which, however, failed to stop the entrance of natural gas into Birmingham. It is an old story, this protesting against the march of progress by those who think their immediate interests will be imperiled by an innovation.

The introduction of steam into industry was followed by riots. Every labor-saving machine has been feared by those who expected to be thrown out of work. But in the end none of the disastrous consequences looked for has actually happened. The innovation has triumphantly been incorporated into our industrial system with resulting benefits all around, including even those who were most fearful over its introduction.

The infant oil industry whose chief market for its products was in illuminating lamps might have worn itself out protesting against the general adoption of gas for lighting. The gas industry itself might have protested indefinitely against the coming of the incandescent lamp which has made gas light as passe as the coal oil lamp.

Instead, both the oil and the gas industries set themselves to find new uses and markets for their products and today they have outlets that make their former illuminating market appear infinitesimal in comparison.

These historic parallels are suggested for the consideration of the protesting citizens of Illinois who think they can block the competition of natural gas with the coal of their state by having some state official imitate King Canute in ordering back the ocean.

The petition of the protestants is worthy of preservation as a curiosity. It argues that "the sale and consumption of Illinois coal is absolutely essential to the prosperity of the petitioners," that their homes and livelihood are threatened, that the destruction of their buying power would be a blow to the rest of the people of Illinois, and demands that "all public agencies do everything possible to increase the production and consumption of Illinois coal and to prevent the coming into the State of Illinois of any product which takes the place of Illinois coal for fuel purposes."

If there were any virtue in that argument the fuel oil industry and the oil burner industry might be expected to be lining up with the coal miners and the coal association. The coal men indeed have been resentful of the competition of fuel oil but it is not on record that they ever went to the extreme of trying to have state officials ban shipment of fuel oil into coal producing and consuming states.

The vast expansion of natural gas pipe lines to great consuming centers, notably Chicago where the oil burner has been making such progress, might worry the oil man as much as the coal man, but he recognizes that if there is anything to be done about it, it must be more practical than asking states for an exclusion act against gas pipe lines.

This competition between industries is not new and is certain to become keener as research reveals greater possibilities of industrial expansion into competing markets.

In the transportation world what the competition of the motor car, truck and bus is doing to the railroads is an old story. The improvement of our inland waterways, which seems likely to be the next great development, will be another example of this interindustrial competition. Meanwhile the expansion of natural gas lines for hundreds of miles is likely to be followed by a similar construction of pipe lines for the transportation of gasoline, three projects having already been announced.

All these things make for progress and are inevitable in the evolution of our industrial system and must be accepted and even welcomed.

Particularly is this true of any form of improvement in distribution which is the one division of industry that has sadly lagged. Epochal advances have been made in production and in sales, but comparatively little progress has been accomplished in eliminating wastes in distribution generally, with some notable exceptions.

The new gasoline lines, constructed not merely to transport motor fuel from the refinery to a terminal but to be utilized as a direct outlet along the way, will be so far superior to the older methods which just grew, like Topsy, rather than being designed upon any definite plan of efficiency, that their general adoption will be irresistible.

Increased efficiency, producing increased revenue, will provide means for further expansion of the industry and the benefit of the consuming public, another phase of the endless cycle of human advancement.

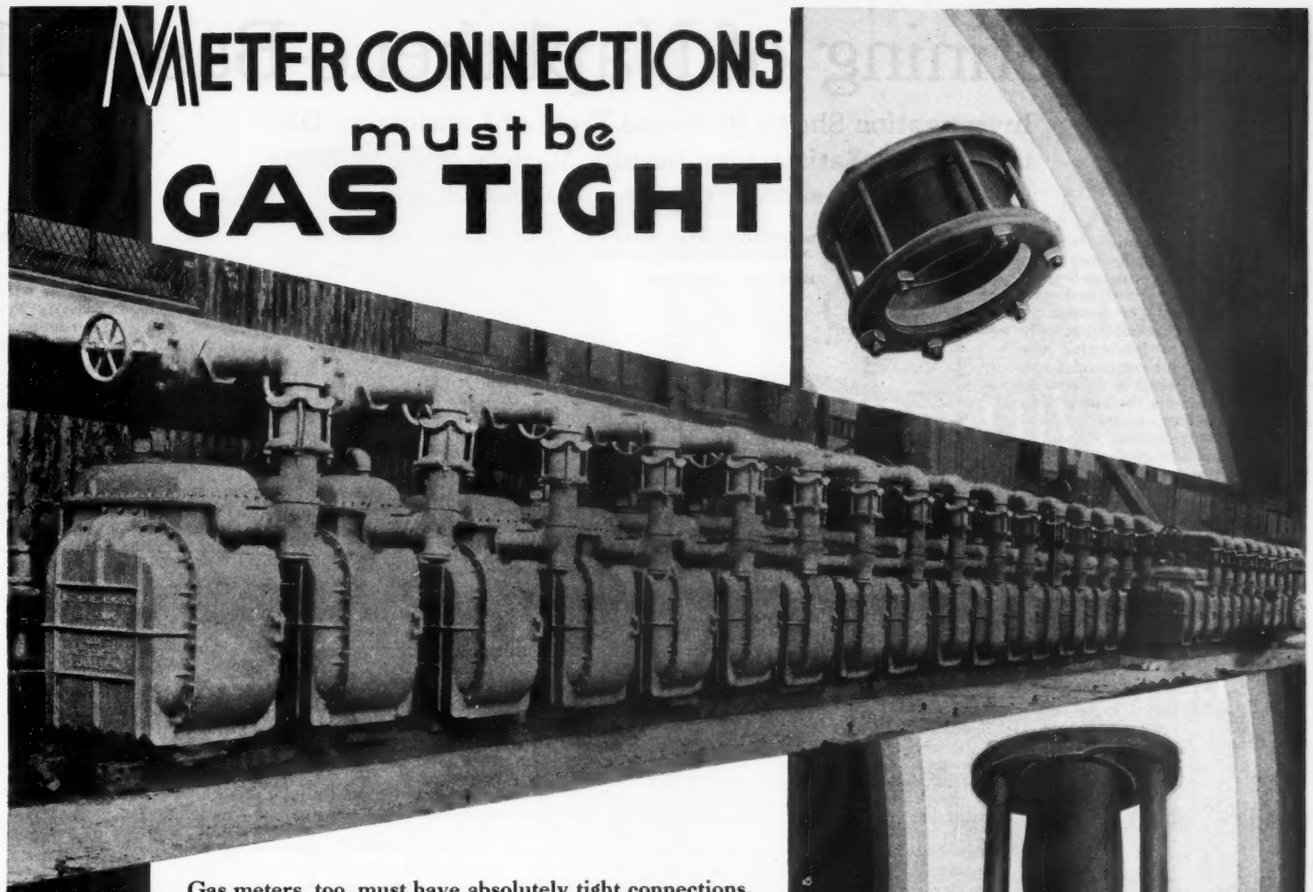
It is as idle to seek to divert these trends in progress as it has been to lament the tendency of modern industry and business to grow bigger. Despite all the agitation of a generation ago, even when translated into antitrust acts, the evolution of the time has forced the creation of larger and larger units required to do the work of the present day world.

If the little local gas companies had been limited to their immediate territories they would never have been able to find the means to extend their pipe lines hundreds of miles to new sources of supply and new centers of consumption.

The great mass of the gas-consuming population of the country would have been without the advantage of modern conveniences. The same is true of the electric industry. It has been true of the oil industry whose growth to meet present demands would have been impossible without adequate capital and organization assuring the motorist a prompt supply of fuel and lubricants anywhere on America's highways.

The tendency towards larger units is being forced by the natural growth of the country and of the oil business. Tasks are constantly coming up which require larger effort than is possible by smaller organizations alone. This is being recognized by the public which is no longer disposed to think that big business must necessarily be evil. People see the necessity of big organizations to perform big tasks. And in the rivalry of industries, the constant invasion of other fields, as gas displaced kerosene, electric light replaced gas, and as fuel oil threatened coal and now both fuel oil and coal are menaced by natural gas there is ample assurance that there will always be sufficient competition to protect the public from the abuses of monopoly.

METER CONNECTIONS must be GAS TIGHT



Gas meters, too, must have absolutely tight connections. Dresser Couplings dominate for this service—just as they dominate for high pressure pipe lines. Easy to install, Dressers *remain permanently tight* under all working conditions. First cost is the only cost.

S. R. DRESSER MANUFACTURING CO.
Bradford, Pa.

DRESSER COUPLINGS DOMINATE

for this service

Acid Refining of Naphthene-Base Oil

Investigation Shows 20-Pound Treat of Lubricating Distillate Gives Satisfactory Results. Variety of Tests Made

By M. K. Thornton, Jr., W. A. Frier, T. A. Francis and C. F. McBurnett
Texas A. & M. College

Lubricating distillates contain in addition to the higher boiling hydrocarbons, oxygen, sulphur and nitrogen-bearing compounds. The unsaturated hydrocarbons, oxygen bodies, sulphur compounds, and nitrogen-bearing compounds are usually detrimental to lubricating oils which are to be sold for commercial use.

The hydrocarbons which are found in lubricating distillates are the higher boiling paraffins, olefines, aromatics, and naphthenes. The paraffins resist alkalies and are not absorbed to a great extent by sulphuric acid. The paraffins react with chlorine and bromine in sunlight, but do not react with iodine. Olefines are absorbed by sulphuric acid and are polymerized by it. Pure aromatics are not absorbed by sulphuric acid, but they do react with the halogens. However, in the presence of other hydrocarbons some of the aromatics may be absorbed by the acid or sulphonated by it. The naphthenes resemble the paraffins in properties.

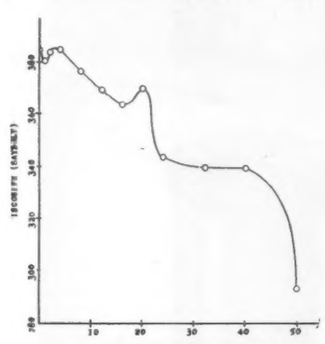


Figure 1—Curve showing the effects of sulphuric acid on the viscosity of a naphthene-base lubricating oil.

Naphthenes or cycloparaffins are called hydroaromatics because they contain the five or six-membered carbon ring but with more hydrogen than the corresponding aromatics. They are probably present to some extent in all petroleums, but occur in large amounts in the heavy sulphur-bearing and asphaltic varieties of petroleum. They are isomeric with the olefines. These naphthenes closely resemble the paraffins in physical and chemical properties, and are much more stable than the olefines. The A.P.I. gravities of the different naphthenes are lower than those of the corresponding olefin isomers.

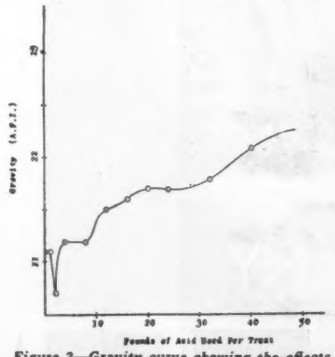


Figure 2—Gravity curve showing the effects of sulphuric acid on a naphthene-base lubricating oil.

Free oxygen is found in lubricating distillates in addition to the many oxygen compounds. Fatty acids and their derivatives, naphthenic acids, phenols and asphaltic and resinous bodies are the most evident of the oxygen compounds found in the petroleum.

Hydrogen sulphide, thiophene, thiophenes, alkyl sulphides, and mercaptans are the sulphur compounds expected to be found in the lubricating distillates. Alkyl sulphates are not likely to be found in the distillates because of their much higher boiling points and because of the ease with which they decompose upon heating.

Nitrogen-bearing compounds in lubricating distillates consist of alkylated quinolines and iso-quinolines. These bases have a high specific gravity and an extremely pungent odor. They form sulphates which are soluble in the acid.

Sulphuric Acid Treatment

Very little is known about the action of sulphuric acid in the refining of petroleums, in spite of the fact that this acid has been used for a half a century and extensive studies have been made on its effects in the refining of petroleums. Its action on the petroleum oils is undoubtedly both chemical and physical in nature. This acid acts as a solvent for many sulphur compounds, resins, sulphates and tars; and chemically it acts as a catalytic agent for polymerization or it forms compounds that catalyze polymerization, and it also acts as an oxidizing agent, sulphonating agent, and forms additional compounds.

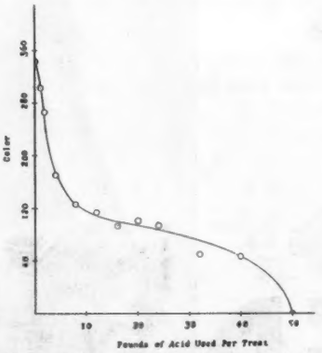


Figure 3—Curve showing the effects of sulphuric acid on the color of a naphthene-base lubricating oil.

Since sulphuric acid causes polymerization of unsaturated hydrocarbons in the pure state; it is reasonable to suppose that will do so when the unsaturates are mixed with the inert saturates. This rate of polymerization would probably decrease, unless the presence of some oxygen bodies and sulphur compounds found in the petroleum have a catalytic effect in the reaction. That they have this effect is shown by the rate at which polymerization takes place.[1]

Procedure

There are various factors which affect the refining of lubricating stock; namely, the temperature of the treat, the kind of oil, the time of the treat, and lastly and probably most important, is the amount of acid used. In this experiment all the factors with the exception of the quantity of acid used were kept as nearly constant as possible.

One liter of 350 viscosity lubricating stock of a South Texas crude was treated in each case. The temperature of each was kept at 100° F., the stock was agitated with the acid by use of air until a distinct "pepper" was formed. The acid sludge was broken out with water, and the treated oil filtered off through well washed cheese cloth. The acid treated oil was then washed with water; treated with a soda ash solution; rewashed until free from soaps; and "brightened." The following tests were made to determine the physical and chemical properties of the different treats; the Lovibond color test; the index of refraction; Conradson-carbon content; the refining loss; the flashpoint test; the A.P.I. gravity; the static coefficient of friction;[2] viscosity; the olefin and tar value; the ash content; the surface tension; and the interfacial tension. (The coefficient of friction, the interfacial and surface tension, ash content, and Conradson-carbon content were determined on oil which had previously been filtered through filter paper.)

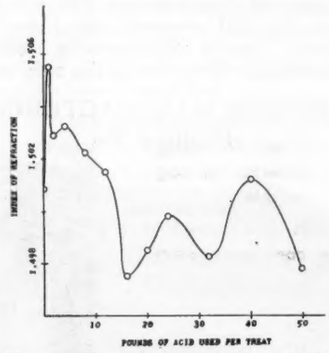


Figure 4—Curve showing the effects of sulphuric acid on the index of refraction of a naphthene-base lubricating oil.

The methods of testing used in this experimental work are those outlined in the Kansas City Laboratory Petroleum Testing Manual. The results obtained from these tests are contained in Table 1.

THE EFFECTS OF SULPHURIC ACID REFINING ON THE PROPERTIES OF A NAPHTHENE-BASE LUBRICATING OIL

Lbs. acid	Refining loss	Flashpoint	Viscosity	Index of refraction	Gravity A.P.I.	Color Lovibond
0	0	345	385	1.5009	21.1	344
1	13	355	380	1.5055	21.1	304
2	15	357	384	1.5029	20.7	266
4	33	358	385	1.5032	21.2	170
8	31	352	376	1.5022	21.2	126
12	30	349	369	1.5015	21 5	94
16	20	354	364	1.4975	21.6	74
20	19	360	370	1.4985	21.7	80
24	16	361	343	1.4998	21.8	74
32	35	354	340	1.4982	21.8	50
40	27	350	340	1.5012	22.1	47
50	23	352	293	1.4978	22.3	21

Lbs. acid	Tar value	Coefficient of friction	Surface tension	Interfacial tension	Conradson carbon	Ash
0	26	.1500	32.3	49.58	.0132	.0221
1	19	.1485	32.3	50.58	.080	.0335
2	24	.1560	0	50.58	.062	.0242
4	24	.1548	32.3	50.58	.0735	.0241
8	26	.1526	32.3	49.58	.0605	.0198
12	23	.1512	32.0	51.78	.054	.018
16	19	.1535	32.0	51.78	.05	.0162
20	21	.1988	32.0	49.58	.041	.0218
24	18	.1609	32.2	52.88	.034	.0134
32	18	.1659	32.2	54.08	.0240	.0107
40	21	.1662	32.2	55.28	.028	.0103
50	14	.1750	32.0	56.58	.0835	.0139

Results of the Tests

The data from the tests were plotted on co-ordinate paper as the ordinates against the quantity of acid used as the abscissas. The following curves were drawn:

From the curve (Figure 1) showing the effects of sulphuric acid on the viscosity of the distillate, it can be seen that the decrease of the viscosity with an increase in the amount of acid used on up to 50 pounds per barrel, varies from 0 to 24 per cent. When 1 pound of acid was used the viscosity decreased abnormally. This abnormality is also found in other curves but no adequate explanation for this phenomenon has been found. When 2 pounds and 4 pounds of acid were used, the viscosity remained the same as that of the unrefined lubricating distillate. These two treats emulsified easily with the addition of water and were exceedingly difficult to break out and wash. There was evidently insufficient acid present in these treats to dissolve out all the tars and sulphur compounds formed during the treatment. A further increase in the amounts of acid used caused the viscosities to decrease, with the exception of the 20-pound treat. The sudden rise in the viscosity may be due to the fact that this amount of acid is sufficient to react with

(Continued on Page 111)

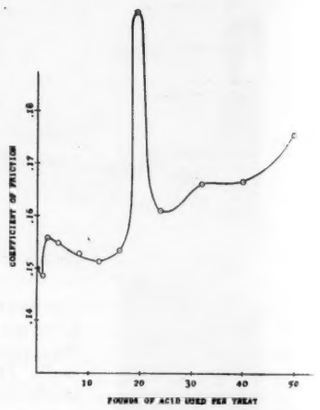


Figure 5—Curve showing the effects of sulphuric acid on the coefficient of friction of a naphthene-base lubricating oil.

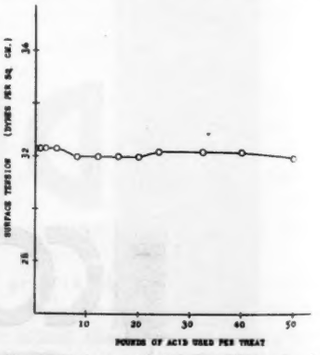
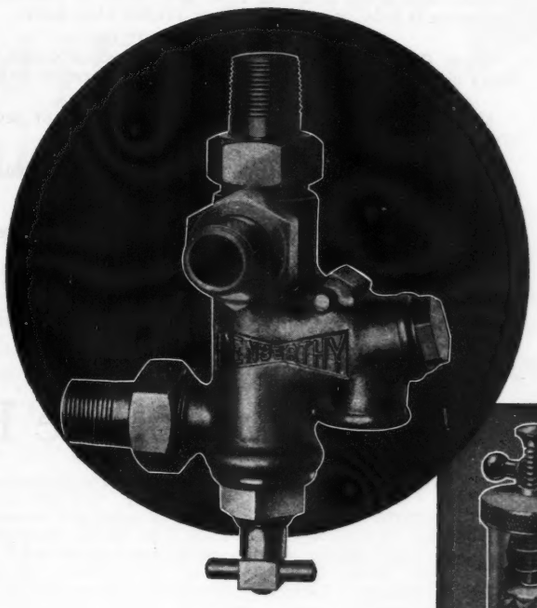


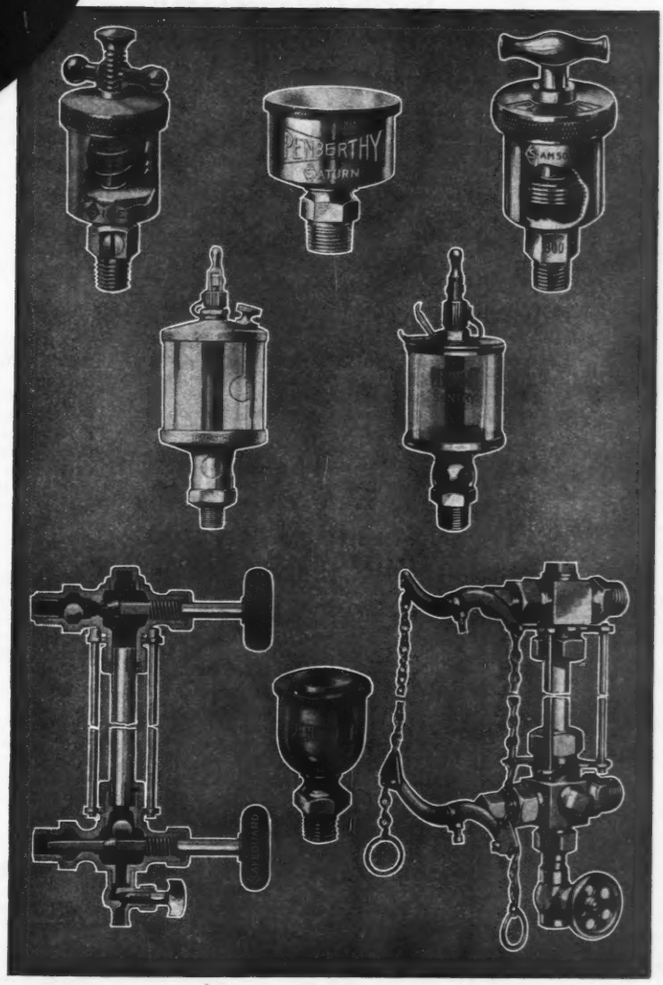
Figure 6—Curve showing the effect of sulphuric acid on the surface tension of a naphthene-base lubricating oil.

[1] See The Oil and Gas Journal, March 6, 1930.
[2] J.I.E.C.—14—682, 626.



ECONOMY SUGGESTS

PENBERTHY PRODUCTS



THE fact that such a large number of operating organizations in the "Close Buyer" class have for years used only these injectors, liquid level gages and lubricating devices, is significant of the fundamental economy of Penberthy Products.

These Penberthy Products are cast from new brass . . . not made from spun or stamped brass. The design and workmanship allow for the rough handling that is probable.

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REESER SAYS REFINERY SITUATION SHOWING CONSISTENT IMPROVEMENT

By E. B. Reeser
President, American Petroleum Institute

May I congratulate the industry for bringing about a decided improvement in the refining situation. The figures released by the Institute this week show that the crude run to stills was 181,000 bbls. per day below the peak of 2,699,600 bbls. run during the week ending April 26, 1930. The reduction of gasoline stocks during the present month has been very satisfactory. The total reduction since April 1, 1930, amounts to 9,316,000 bbls.

Partial returns of the questionnaire on how much working stock will be required indicate that somewhere between 25,000,000 and 30,000,000 bbls. are ample to meet usual conditions. In as much as the total stocks at this time are approximately 44,000,000 bbls, it is obvious that a further curtailment is necessary in order to reduce the stocks to where they properly should be it will be admitted that stocks in excess of current demand at this time of the year result in economic and physical waste. May I urge upon each refining unit in the industry the wisdom of its adopting, independently, a permanent operating policy which will not permit of the creation of any stocks beyond its known requirements.

Realizing that the crude stocks aboveground are excessive, the producing division has adopted a program which will limit the production of the United States to somewhat less than the demand, hoping to bring about a gradual reduction in stocks until they reach a reasonable point.

In as much as the producing division is composed largely of the same interests as that of the refining division, it is reasonable to expect the same general policy to follow in both divisions.

OIL MAN'S CALENDAR

AUGUST

4-9—New York, International Exposition of American Import Trade. Grand Central Palace.

26-28—Chicago, National Air Races.

SEPTEMBER

2-4—Toronto, Ontario, North American Gas Tax Conference, King Edward Hotel.

4-5—Southwestern district, A.P.I. Division of Production, Buccaneer Hotel, Galveston, Tex.

8-12—Cincinnati, Ohio, eightieth meeting, American Chemical Society, Hotel Gibson.

17—Columbus, Ohio, Ohio Petroleum Marketers Association, Deshler-Wallick Hotel.

17-19—Atlantic City, N. J., National Petroleum Association, Hotel Traymore.

29-Oct. 4—Pittsburgh, Pa., Petroleum Section, National Safety Council.

OCTOBER

3—Tulsa, Okla., Board of Directors, American Petroleum Institute, Mayo Hotel.

4-11—Tulsa, Okla., International Petroleum Exposition and Congress.

6-11—Washington, D. C., sixth International Road Congress.

6-11—Washington, D. C., Exhibition, American Roadbuilders Association.

13-17—Atlantic City, N. J., American Gas Association, Auditorium.

14-16—Kansas City, Mo., Convention, Big Four State Jobbers.

16-25—London, England, Olympia Motor Show.

22-24—Pittsburgh, Pa., transportation meeting, Society of Automotive Engineers.

NOVEMBER

2-5—St. Louis, Mo., Marketing Congress, Independent Oil Men of America, Statler Hotel.

6-11—Berlin, Germany, International Automobile Show.

10-13—Chicago, eleventh annual meeting, American Petroleum Institute, Stevens Hotel.

DECEMBER

1-5—Memphis, Tenn., ninth annual Asphalt Paving Conference. the Asphalt Institute and Association of Asphalt Paving Technologists.

JANUARY

3-10—New York, National Automobile Show.

24-31—Chicago, National Automobile Show.

Operators in Darst Creek Agree on New Restriction Program

SAN ANTONIO, Texas, Aug. 4.—A new restriction agreement for Darst Creek was reached at a conference of operators in Seguin today. The operators took 45 per cent of the July 1 potential as being the present potential, estimating the field had gone off 55 per cent due to wells flowing open. Thirty-five per cent of the new estimated potential was taken as the figure for the allowable runs until August 15, when wells will be gauged and a new agreement reached.

Under the temporary arrangement the Humble Oil & Refining Co. will run 7,500 bbls., The Texas Company, 10,500; Gulf Oil Corp., 8,150; Magnolia Petroleum Co., 5,680; Sun Oil Co., 3,500; J. S. Abercombie & Co., 1,750; Empire Gas & Fuel Co., 1,050; Turman, 260; Cranfill & Reynolds, 100; Jake Jarmon, 210; Penn Oil Co., 150; Trinity Drillers, 365 bbls.

Pipe Line Activity Stimulates Demand For Oil and Gas Maps

Construction of a vast network of natural gas pipe lines throughout the United States and unusual activity in the building of crude oil trunk pipe lines and gasoline pipe lines has made especially valuable the large wall maps published by The Oil and Gas Journal showing all oil and natural gas trunk pipe lines in the United States. These maps are printed on extra heavy bond paper, the natural gas lines being shown on one side of the sheet and the oil lines on the other side.

A limited number of copies of these maps are still available at a cost price of 50 cents each, that price covering the cost of both maps and postage. Companies desiring large numbers of these maps should place their orders as quickly as possible.

Amos L. Beaty Hurt, Wife Killed, in Auto Accident in France

Mrs. Amos L. Beaty, wife of the chairman of the board of the Transcontinental Oil Co., was killed in an accident near Bordeaux, France, while she and her husband were touring France by automobile. Mr. Beaty was also injured but not seriously and has sailed with the body for the United States. The burial will be in Texas.

Mr. Beaty was formerly chairman of the board of The Texas Company and is a director and treasurer of the American Petroleum Institute.

High Spots in Field News

OKLAHOMA

State's production, 554,000 bbls. daily, is lowest in years.

KANSAS

Notwithstanding additions from new wells in Eastborough Pool, state's production is holding steady at about 116,000 bbls. daily.

SOUTHWEST TEXAS

Darst Creek operators agree on arrangement which will hold runs to 39,215 bbls. daily till August 15, when new agreement will be made.

ROCKY MOUNTAIN AREA

Midway Dome test believed to offer possibility of new light oil field in Wyoming.

CALIFORNIA

With prospect of production being held to about 600,000 bbls. daily the outlook is regarded as more reassuring.

WEST TEXAS

Big gas flow in Andrews County well gives rise to belief that new oil pool may be opened.

EAST CENTRAL TEXAS

Pure Oil Co. well, dry, defines northeast edge of Van Field.

EASTERN FIELDS

Guernsey County, Ohio, has week's best well, producing 120 bbls. first 24 hours.

Late News of the Fields

NORTH LOUISIANA

SHREVEPORT, La., Aug. 5.—R. W. Norton's No. 1 Hill, Section 33-23-16, northwest Caddo Parish, Louisiana, a rank wildcat, gauged 7,812,000 feet of gas with a spray of 15 bbls. of fluid, almost pure gasoline, from a depth of 5,506 feet in the Trinity. It is North Louisiana's deepest commercial well and was bailed in Sunday.

GULF COAST

HOUSTON, Tex., Aug. 5.—Humble Oil & Refining Co.'s No. 3-A Beard on the south side of Boggy Creek Dome, Anderson County, was brought in flowing at the rate of 8 bbls. hourly, but for the present has been shut in waiting orders. Only one other rig is operating at Boggy Creek, this being on No. 3 Gauger, also on the south side of the dome, which was drilling rock at 1,705 feet.

WEST TEXAS

FORT WORTH, Tex., Aug. 5.—Fuhrman Petroleum Co.'s No. 1 Ford, SW cor. Section 16, Block A-43, Andrews County, tested 30,000,000 feet of gas from 4,062-67 feet. Former estimates were high.

Gulf Production Co.'s No. 5 Hughes, in Section 4, William Teer Survey, old McCamey-Taylor Pool, Upton County, is shut in for pipe line connections after making the unexpected record of 75 bbls. per hour from pay topped at 2,190 feet. This is surrounded by abandoned wells and small pumpers and may help to revive this old area.

ROCKY MOUNTAIN AREA

DENVER, Colo., Aug. 5.—Midwest Refining Co.'s No. 11 Middy, NE Section 23-35-79, on Midway Dome, Natrona County, Wyoming, ran and cemented the 9⅝-inch casing on top of the second Wall Creek sand at 5,157 feet and the hole will stand five or six days for the cement to harden before drilling out the plug. The well cored 30 feet of sand showing gas saturation at the top and oil for the remainder, but on account of the hole being full of mud, which held back pressure, the significance of the discovery can not be determined until the plug is drilled out and the hole bailed.

Standard Oil Co. of Colorado's No. 1 Fitzhugh, SE SW Section 34-33-1, East Chromo Dome, in Archuleta County, Colorado, just north of the New Mexico line, encountered a show of gas at 260 feet and at 310 feet there was a heavier show of gas followed by oil rising in the hole. The oil is green and apparently of paraffin base and high gravity. The driller reports that the showing is in the Benton shale, which lies above the Dakota sand.

SOUTHWEST TEXAS

Grayburg Oil Co.'s No. 1-B Kimball, 7 miles southwest of the Pettus Field, got salt water at 3,583 feet and Arkansas Fuel Oil Co.'s No. 1 Kimball got salt water at 3,556 feet. They are a quarter mile east of Grayburg's No. 1-A Kimball, which made an oil well at 3,568 feet. They are the first to reach the sand in that area since the No. 1-A Kimball was drilled.

OKLAHOMA

Some of the wells in the Konawa Pool were taking new potentials on August 5, and the gauge on that day was 40,686 bbls. from 95 wells. The rest of the wells were to take potentials the next day. The Mid-Continent Petroleum Corp.'s Harjo lease in Section 20-6-6 made a new potential of 24,250 bbls. from six wells. This lease has the largest production in the pool.

The Texas Company's No. 1 Ogee, NE cor. SE NE Section 17-8-5, Pottawatomie County, south of the Maud Pool, made 140 bbls. from the Wilcox sand at 4,018-40 feet, after a shot.

The daily gauges from the Oklahoma

(Continued on Page 151)

SCORE CARD ON OIL PRODUCTION

Below is shown allotted average daily production in the United States, April to December, inclusive, suggested by the Committee on Economics of the Federal Oil Conservation Board, and the actual daily average production during the week ending August 2:

	Allotted (bbls.)	Actual (bbls.)	Over (bbls.)	Under (bbls.)
California	610,000	602,100	.....	7,900
Oklahoma	655,000	554,005	.....	100,995
Texas	750,000	873,577	123,577	.....
Others	480,000	468,681	.....	11,319
Total	2,495,000	2,498,363	123,577	120,214

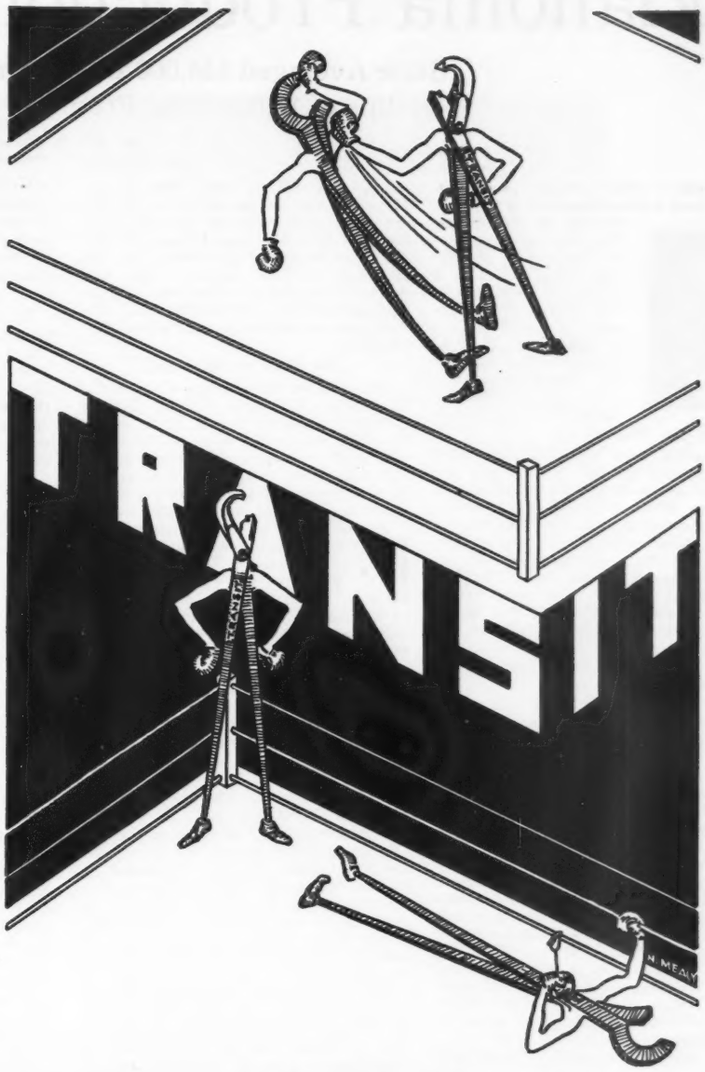
Transit Red Head wins again . . . . . .

"Hello, everybody, Grant Memee speaking—Well, the boys are all set to go—Pipe Tong in his corner, doesn't look so good—not so good—Not a cloud in the sky, the field is bathed in a—A-ah, TRANSIT Red Head just comes on, and what a hand this baby gets—In the pink of condition — Best I have ever seen him — There goes the gong — the boys are in the center of the ring—TRANSIT leads with the left — then the right—Pipe Tong slips—he is down —no, he is up— now they are mixing—Pipe Tong slips again — down — looks like he is going to stay down this time—the referee is counting—

"Transit Red Head Wins Again"

"Wait, we'll call him over to say a few words."

"Hello, folks, Dad and Mother, all my little brothers! That was easy, no trouble sticking with that baby. My trainer in Oil City developed my strength and gave me perfect balance and I didn't slip once."



For a sure winner, insist on TRANSIT Red Head TONGS.

Special new solid steel head, specially heat treated.

Bulletin 5-F, "Tools for Pipe Line Construction," on request.

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Tulsa, Okla., or any store.

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Los Angeles, California

E. L. WILSON HARDWARE CO.
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NATIONAL TRANSIT
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REEVES & SKINNER MACHINERY CO.
St. Louis, Mo.

Oklahoma Production Lowest in Years

State Averaged 554,000 Bbls. a Day for Week, Which Is a Decline of 11,000 Bbls. From the Previous Week's Gauge

By W. A. Spinney
Staff Correspondent, Oklahoma Fields

Oklahoma's daily average production for the week ending August 2 is the lowest in several years. The State averaged approximately 554,000 bbls. a day which is a decline of about 11,000 bbls. from the previous week's gauge. It brings the production down to almost the figure operators agreed upon at a recent meeting when the 550,000-bbl. a day mark was set for Oklahoma.

Production from the Oklahoma City Pool averaged 100,300 bbls. a day for the same seven days. If production had been kept within the requirements which were estimated by the pipe line companies at 85,000 bbls. a day, the production of the State would have been below the amount agreed upon. Notwithstanding the 16 new wells completed in the Oklahoma City Pool, with a potential production of 125,000 bbls. a day during the last seven days operators are keeping the oil production down to the estimated requirements.

Tom Slick Oil Co.'s No. 1 Baker, NW cor., Section 1-11-3w, in the north end of the pool, blew in with an estimated flow of 150,000,000 feet of gas. It was opened an hour and made 78 bbls. of high gravity oil, and then freezing the connections caused the well to be shut in. It was opened later and made 1,425 bbls. of oil. The total depth of the well is 6,411 feet.

Prospects for production in the south end of the field were not bright. Several tests were bailed down in that area and nothing showed up. The Continental Oil Co.'s No. 2 Sudik, NE cor. NW NE, Section 6-10-2w, was bailed down 3,700 feet, and nothing showed. The total depth of the test is 6,644 feet. Other wells which have been bailed deep were Indian Territory Illuminating Oil Co.'s Nos. 1 and 2 Reynolds, in Section 6-10-2w.

Injunction Suits May Be Dismissed

Extension of the U-7 zone (the drilling zone) inside the city limits of Oklahoma City has made elimination of several injunction suits probable. The ordinance bringing a wide area in the Capitol Hill district into the city limits which became effective July 31, affected suits in the district court. The oil companies were granted time to file applications for permits for drilling tests. If permits are granted the suits are expected to be dismissed. Among the suits were those of Head and others, involving a proposed location in Block 2, Weesner addition, and Hall & Briscoe's locations in Block 6, Central addition, and Block 22, Walnut addition. All three locations have been taken into the new U-7 zone.

Four new permits were issued during the last week for tests inside the city limits. Three of the permits were to the Phillips Petroleum Co. and the other was to the Indian Territory Illuminating Oil Co. Several other applications were held up because of failure to comply with the regulations. The bond of $200,000 required by the city before a permit is issued is one of the stumbling blocks. Permits issued to the Phillips Petroleum Co. were for wells at 516 East Fifteenth Street, South, 2309 South Byres Avenue and 2412 South Central Avenue. All of these locations are in an area closely built with residences. The permit to the Indian Territory Illuminating Oil Co. was for a test at 630 East Twenty-eighth Street, South.

Tom Slick Oil Co. and Indian Territory Illuminating Oil Co.'s No. 1 Lloyds Subdivision, SE cor. SW NW, Section 14-11-3w, was disappointing to the owners. The well made 136 bbls. the first hour, 89 bbls. the second hour, 99 bbls. the third hour and 2,320 bbls. the first 22 hours and 35 minutes. The total depth of the well is 6,586 feet. The gas was estimated at 23,000,000 feet. The well was completed by the "washing-in" method.

No Show of Oil or Gas

The Prairie Oil & Gas Co.'s No. 1 V. Sudik, NW cor., Section 5-10-2w, Cleveland County, in the south end of the field, was bailed down to the 5,000-foot level, without a show of oil or gas. The bailer was lost in the hole and efforts were turned toward fishing it out. The total depth of test is 6,695 feet.

In the center of the Oklahoma City Pool, Indian Territory Illuminating Oil Co.'s No. 5 Watters, SE cor. SW NE, Section 25-11-3w, was completed making 65 bbls. the first hour and 1,544 bbls. in 21 hours. The gas volume was estimated at 2,000,000 feet. The well was bailing for several days and was bailed to the 5,500-foot level.

The Coline Oil Co.'s No. 4 Warren, SW cor. NW SW Section 18-11-2w, on the northwest side of the Oklahoma City Pool, which has been producing since March 9, 1930, broke through the casing below the control head Thursday and was blowing wild. The gas was estimated at 50,000,000 feet a day and it was spraying oil. The sand cut through the casing below the master gates. The gas was hanging close to the ground, accumulating in low places, adding to the possible fire and explosion hazard. The well had an initial output of 20,000 bbls. a day. The crew was pumping water into the hole to kill the gas flow. It was brought under control the next day.

Indian Territory Illuminating Oil Co.'s No. 1 M.-K.-T., SE cor. SW Section 35-12-3w, extended the production nearer the city limits. The new well spread the producing area to the northwest. It was completed by the washing-in method. The first hour's flow was 182 bbls., the second was 240 bbls. and the third was 217 bbls. It made 3,264 bbls. in 19 hours before being shut in. The total depth of the well is 6,555 feet. The gas was estimated at 10,000,000 feet. The same company's No. 3 H. G. Trosper, NE cor. NW NE Section 14-11-3w, on the west side of the Oklahoma City Pool, was also completed by the washing-in method at a total depth of 6,540 feet. The first hour's flow was 248 bbls. and the first 15 hours was 4,462 bbls. The gas was estimated at 12,000,000 feet.

May Define Southern Edge

In the south end of the field in Cleveland County, Cromwell-Franklin Oil Co.'s No. 1 Reynolds, NE cor. SW Section 6-10-2w, found salt water in sand at 4,348-58 feet. It is the most southerly test in the Oklahoma City Pool and may define the south edge of the area. It is shut down at 4,681 feet, and may be abandoned.

Continental Oil Co.'s No. 2 Sudik, NE cor. NW NE Section 6-10-2w, Cleveland County, which has been bailing for about a week, was cleaned out on bottom without any substantial showing of oil. The sand was found at 6,715-44 feet. It is believed the test is off vertical on bottom and it will be drilled deeper.

The wildcat tests near the Oklahoma City Pool are being watched as possible pool openers. Mid-Kansas Oil & Gas Co. and Ramsey Petroleum Co.'s No. 1 Messer, SW cor. Section 32-14-3w, Oklahoma County, has landed the 9-inch casing at 6,346 feet, after coring a showing of oil and gas. The casing is believed to be landed on top of the Hunton lime.

Prairie Oil & Gas Co. and Tom Slick Oil Co.'s No. 1 Dills, SE cor. NW Section 17-13-3w, was drilling at 6,810 feet. The showing of gas found at 6,600 feet was believed to be diminishing.

Mid-Kansas Oil & Gas Co.'s No. 1 Cornwall, SE cor. SW Section 18-12-1w, in the Nicoma Park area east of the Oklahoma City Pool, and offsetting the discovery well, had the Simpson sand at 6,710 feet and was drilling in it at 6,935 feet, with nothing showing. The discovery well is producing from a sand at 6,350 feet.

North End Contributing Wells

The north end of the field is contributing new wells to the Oklahoma City Pool almost daily. Wirt Franklin Petroleum Corp.'s No. 1 Page, SE cor. Section 32-12-3w, extends the production in the field one location west and is the most northwesterly well in the pool. The well was first completed and was shut in after being open only a few minutes. The gas was estimated at 125,000,000 feet. It was later opened for a production test and made 911 bbls. in two and one-third hours and was then shut in.

The wildcat test of the Magnolia Petroleum Co. and Ramsey Petroleum Co.'s No. 1 Johnson, NE cor. SW Section 35-13-3w, was drilling in lime at 7,178 feet.

Several new tests in the Wanette Pool, in Pottawatomie County, found water and may be drilled deeper in search for other pay horizons. The producing area in the pool is being limited to a small district by these water wells. The estimated potential production of the Wanette Pool is 15,000 bbls. and the actual production is 4,500 bbls. daily.

Independent Oil & Gas Co.'s No. 1 Jamison, SE cor. SW SE, Section 15-6-3, in the Wanette Asher Pool, had sand at 3,691-99 feet. After drilling out the cement plug it had a hole full of water.

Gypsy Oil Co.'s No. 1 Navarre, SE cor., Section 15-6-3, in the Wanette Pool, had sand from 3,610-18 feet, where it found a hole full of salt water after drilling out the cement plug.

Shell Petroleum Corp.'s No. 2 Case, SE cor. SW SW, Section 14-6-3, in Pottawatomie County, also filled up 2,000 feet, with water from sand at 3,618-29 feet. It is now shut down.

Wilcox Oil & Gas Co.'s No. 3 Atkins, NE cor. NW SW, Section 23-6-3, had sand at 3,508-31 feet where it made 2,407 bbls. in 24 hours. It is now shut down until August 15 for proration.

Big Gasser in Latimer County

Latimer County, in the southeastern part of the State, has a huge gas well. Mid-Western Oil & Gas Co.'s No. 1 Pulsey, SE cor. NE SW, Section 1-6-22, in the Red Oak Field, is estimated to be making 15,000,000 feet of gas a day from sand at 1,539-1,645 feet.

Red Bank Oil Co.'s No. 1 fee, SE cor. SW NE, Section 23-9-24, a wildcat in LeFlore County, was drilling in Simpson sand at 6,160 feet, with nothing showing. The top of the Simpson sand was found at 6,093 feet.

The Chandler area in Lincoln County has two wildcat tests that were showing oil in the shallow formations. Magnolia Petroleum Co. and others' No. 1 Winship, in Section 2-13-4, south of the West Chandler Pool about 5 miles, cored a showing of oil at 4,436-41 feet, and was drilling deeper at 4,560 feet. If the test finds commercial production it may open another producing area in Lincoln County. Tom Slick Oil Co.'s No. 1 Grof, in Section 13-14-3, cored a sandy lime at 4,695-4,705 feet with a showing of oil. It was drilling deeper at 4,740 feet. It is east of the West Chandler Pool.

In the Marshall and Lovell area, Blackwell Oil & Gas Co.'s No. 1 Knecht, NW cor. SW SE, Section 21-18-4w, Logan County, had Simpson sand at 5,950-6,035 feet, where it made 245 bbls. in 24 hours. The well was being drilled deeper.

A Kay County wildcat may open another pool in that area. Blankinship Petroleum Co.'s No. 1 Randol, SW cor. NW SW, Section 17-27-2, had 12 feet of Bartlesville sand at 3,586-98 feet, where enough oil and gas were found to make a well. The test was drilled to 3,617 feet, where water was found. It will be plugged back to 3,602 feet, and given a shot before a production gauge is made.

Activity in Garfield County

The northwest corner of Garfield County is active and is the scene of a wildcat lease play. Several major oil companies have made purchases in this part of the county during the last week. The buying of leases has extended into the southeast corner of Grant County. All the available acreage is believed to be taken

(Continued on Page 75)

WILDCAT OPERATIONS IN OKLAHOMA

(Descriptions are East and North unless marked otherwise)

NORTHERN OKLAHOMA

ALFALFA COUNTY

Company, farm and location—	Remarks:
Smith Brothers' No. 1 Forbes, SE cor. NW NW Sec. 12-27-11w	Shut down 1,232 ft.
J. W. Bailey's No. 1 Acre, SW cor. NE Sec. 14-24-11w	Rigging up standard tools 4,660 ft.; cleaning out.

BECKHAM COUNTY

Ray Johnson and J. R. Cuniff's No. 1 Brower, C NW Sec. 29-10-22w	Drlg. 3,296 ft.
Producers Exploration Co.'s No. 1 Sidell, SE cor. SW SW Sec. 17-9-22w	Shut down 2,402 ft.
Carson et al's No. 1 Danby, SW cor. SE NE Sec. 20-8-22w	Shut down 1,575 ft.

BLAINE COUNTY

Lowen et al's No. 1 Unknown, NW cor. SW NW Sec. 17-16-11w	Spudded and shut down.
Washoma Oil Co. et al's No. 1 Phillips, C NW SW Sec. 12-19-10w	Shut down 3,730 ft.

CADDO COUNTY

Simms Pet. Co.'s No. 1 Cobsa, SW NW Sec. 24-6-11w	Rig.
W. J. Hartley's No. 1 Galbreath, SE cor. NW SE Sec. 29-5-12w	Shut down 3,394 ft.

CHEROKEE COUNTY

Weaver & Proctor's No. 1 Benge, NE SE Sec. 8-14-21	Drlg. 325 ft.

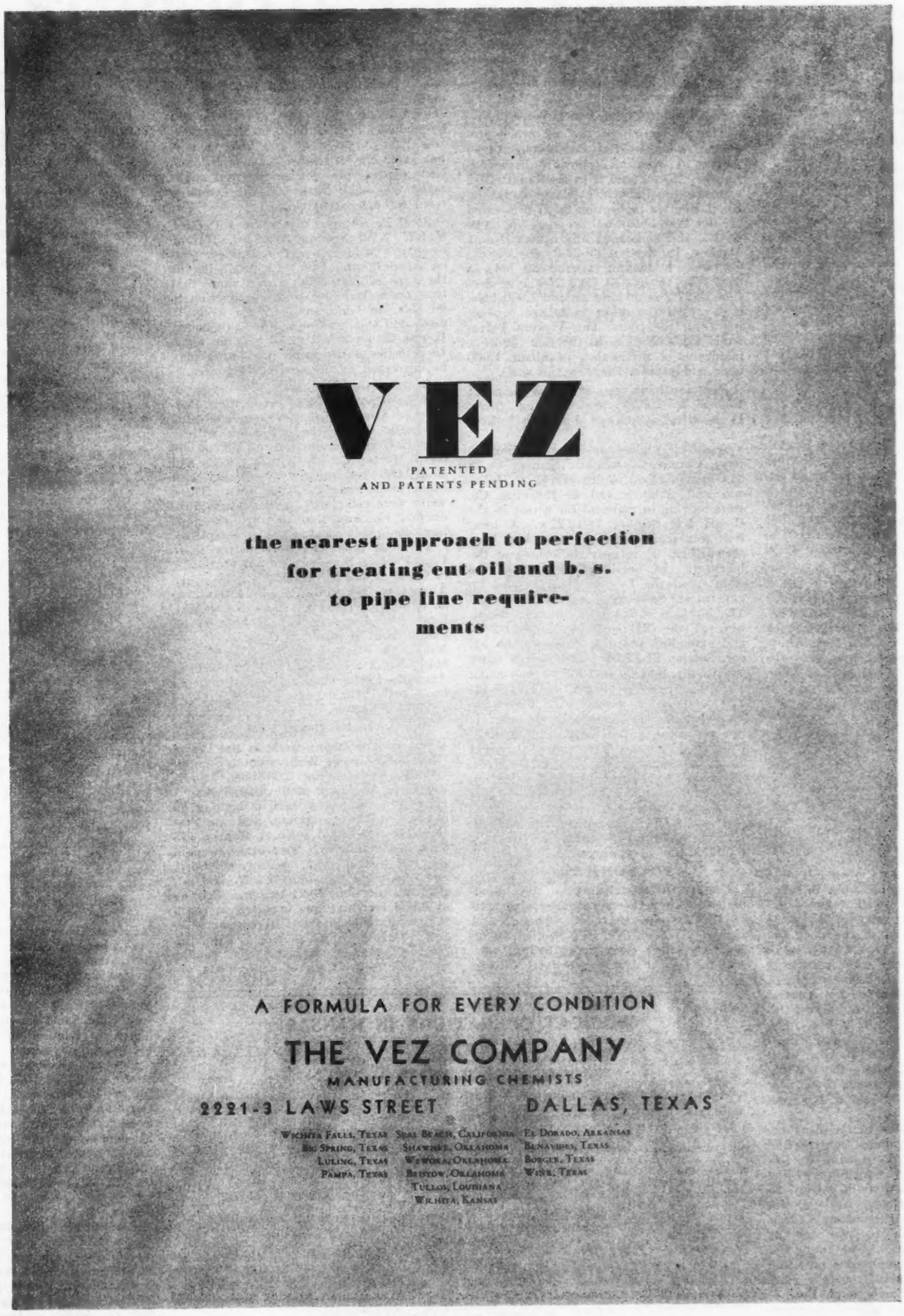
CLEVELAND COUNTY

Harris et al's No. 1 Highbee, SE NW Sec. 20-6-1	Drlg. 6,485 ft.
Daniels & LeWright's No. 1 Vandever, C SW Sec. 15-7-1w	Shut down 3,130 ft.

COAL COUNTY

A. M. Van Orden's No. 1 Jamison, SE NW Sec. 31-1-9	Shut down 1,300 ft.
Blackwell O. & G. Co.'s No. 1 L. Jackson, NW cor. Sec. 26-3-9	Drlg. 2,160 ft.
W. E. McGraw's No. 1 King, C SW NE Sec. 11-1-8e	Shut down 3,030 ft.

(Continued on Page 119)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Shawnee, Oklahoma
Wewoka, Oklahoma
Bristow, Oklahoma
Tullos, Louisiana
Wichita, Kansas
El Dorado, Arkansas
Benavides, Texas
Borger, Texas
Ward, Texas

Eastborough Well Makes 1,262 Barrels

Kansas Production Holding Steady at About 116,000 Bbls. Daily, Notwithstanding Additions From Sedgwick County's New Pool

By W. A. Spinney
Staff Correspondent, Kansas Fields

The eighth well completed in the new Eastborough Pool east of Wichita, in Sedgwick County, the Derby Oil Co.'s No. 1 Cloud, SE cor. SW Section 19-27-2, on a 10-acre tract, made 1,262 bbls. the first 24 hours. It had the chat at 2,984-3,005 feet, where it made 60 bbls. an hour when it first drilled into the pay horizon.

The State's production for the seven days ending August 2 was 116,300 bbls., daily, a decline of about 300 bbls. a day from the previous week's gauges. The State's production is holding steady notwithstanding the new wells found in the Eastborough Pool, which are estimated as good for 1,000 to 3,000 bbls. a day, but are being pinched because of the shortage of pipe line facilities in that area. One of the recent wells in the area completed by the Blankinship Petroleum Co., the No. 1 Shaffer, NE cor. SE NW Section 30-27-2, flowed 180 bbls. an hour.

Phillips Petroleum Co.'s No. 1 Powell, SE cor. Section 11-21-10w, Barber County, a wildcat well, had about 1,000,000 feet of gas at 4,409 feet and a show of oil at 4,440 feet. It is the first showing of oil found in the test, but the showing of gas is the eighth. The Wilcox sand is expected around 4,850 feet.

The wildcat test of the Prairie Oil & Gas Co. and Slick, Pryor and Lockhart's No. 1 Breeick, in Section 23-15-13w, Russell County, is being plugged back from a total depth of 3,322 feet, where a hole full of water was found, to the Silicious lime pay at 3,286-3,305 feet, which had a showing of oil.

May Be Eastborough's Largest

The most recent well to find production in the Eastborough Pool, in Sedgwick County, east of Wichita, was the Blankinship Petroleum Co.'s No. 1 Shaffer, NE cor. NW Section 30-27-2. It is believed to be the largest well in the new pool. It filled a 50-bbl. tank in five minutes and was shut in until other connections could be made. Officials believed it would make 3,000 bbls. a day if allowed to flow wide open. It was later opened and made 550 bbls. in seven hours pinched. The well exceeds all others on its initial gauges. It is the seventh well completed in the pool and extends the producing area a location to the west. The well was producing through 3 and 6-inch lead lines, both of which were connected to the control head. The well as pinched was allowed to produce through the 3-inch line only. The oil was found in the chat at 2,952-70 feet, but it did not start flowing until it reached 2,970 feet, where the big pay was found. The Eastborough Pool now has a potential of 7,500 bbls. a day from seven wells.

Three new pipe lines to the Eastborough Pool are either under construction or proposed. Vickers Petroleum Co. has started work on its 4-inch pipe line from its refinery at Potwin, about 25 miles distant. The Golden Rule Refining Co. is securing rights of way for a new pipe line from its refinery at Wichita to the new pool. The Derby Oil & Refining Co. has completed a pipe line to its plant in Wichita from the company's lease in the Eastborough Pool.

The curtailment plan offered operators in the Eastborough Pool by State Umpire T. C. Johnson apparently has failed. It is reported that one of the operating companies refuses to join in the plan. The Derby Oil Co. is running about 1,000 bbls. a day to its refinery, Prairie Pipe Line Co. is running about 400 bbls. a day and the Vickers Petroleum Co. is planning to handle as much of its production as possible.

Production of Other Wells

The production of the six other producing wells in the Eastborough Pool August 1 was as follows: Fisher & Lauck's Nos. 1 and 2 in Section 19-27-2 were making 1,250 bbls. Same operators' No. 1 Shaffer in Section 30-27-2 is rated around 200 bbls., but is shut in. The E. W. Marland, Inc., and others' No. 1 Mackey, in Section 30-27-2, the discovery well, is making around 20 bbls. a day. The Derby Oil Co.'s No. 1 in Section 19-27-2 is making around 1,000 bbls. a day. All the other wells are producing from the chat. The Vickers Petroleum Co.'s No. 1 in Section 30-27-2, maintains a production of about 1,000 bbls. a day from the Simpson sand.

Five new tests are starting in the pool: Fisher & Lauck are starting three, Derby Oil Co. one and Jones and others one.

Another wildcat test is starting in Gove County in western Kansas on a 47,000-acre block of leases. T. C. Johnson and Atlantic Oil & Refining Co. were moving in material for a test in the C SE NE Section 11-12-27w. A location was made after the area had been core-drilled. It is near the center of the block, in the northeastern part of the county, on the Darton arch, located by government geologists several years ago. The block is outlined as follows: Beginning at the NE cor. Section 4-11-26w, and extending south 10 miles to the SE cor. Section 21-12-26w, and west 8 miles to SW cor. Section 20-12-27w, then north 10 miles to the NW cor. Section 5-11-27w, and east 8 miles to the beginning. It is believed production in the area is not confined to the deep sand possibilities alone. Others have found showings of oil in shallow formations in the area. Tests in the county found the Dakota sandstone was from 200 to 300 feet thick at depths ranging from 800 to 1,000 feet which were found to contain oil. It is believed the Silicious lime will be found in the area around 4,700 feet.

Plan Several Tests

Empire Oil & Refining Co. and others plan to follow the recent producing well of the Aladdin Petroleum Co.'s No. 1 Harris, SW cor. NE SW Section 19-22-11, Greenwood County, by drilling several tests in that area. A lively drilling would probably develop if the crude oil market conditions were normal, but it is expected only the necessary offsets will be drilled. The Aladdin Co.'s new well was first reported at 200 bbls. a day, but later the estimate was doubled and some express the opinion the well might make 600 bbls. flush had the company tried for capacity yield.

Shell Petroleum Corp.'s No. 1 Palmer, C SW NW, Section 36-22-2w, Harvey County, a wildcat well that was completed April 6, and has been producing at the rate of 300 bbls. a day since that time suddenly increased its production to 80 bbls. an hour, early in the week. It made 440 bbls. in five and one-half hours. It was then pinched to 30 bbls. an hour. It is believed the large production may be developed in the surrounding area.

Southwestern Kansas is believed to hold huge potential gas production. Morton and Stevens Counties completed nine gas wells during the last week with a potential gas production of 53,800,000 feet. Morton County with six wells had 46,300,000 feet, and Stevens County with three wells had 17,500,000 feet. These wells were completed by the Argus Production Co. and shut in until the pipe line now under construction is completed.

The four producing wells in the State Line Pool in Sumner County, southwest of Caldwell, made 747 bbls. on the gauge August 1. By well, the production was as follows: Gypsy Oil Co.'s No. 1 Williams, the discovery well, 7 bbls. of oil and 30 bbls. of water on the pump; same company's No. 1 Enderude, flowing 510 bbls.; No. 2 Enderude, 120 bbls. pinched; Amerada Petroleum Corp. and Dixie Oil Co.'s No. 1 Clark, 110 bbls. of oil and 7 bbls. of water.

In the Peasel Pool

The two producing wells in the Peasel Pool, northwest of Wellington in Sumner County, were making 200 bbls. Slick, Pryor & Lockhart and others' No. 1 Peasel, the discovery well, is making 85 bbls. a day on the pump, and the Sinclair Oil & Gas Co.'s No. 1 Kames, 115 bbls. a day flowing. Two other tests in the pool were drilling. Sunray Oil Corp. and Gardner Petroleum Co.'s No. 1 Deal, SE cor., Section 29-21-1w, was drilling at 3,050 feet and was expected to reach the pay horizon in about 10 days at 3,650 feet. Carter Oil Co.'s No. 1 Franklin, NE cor., Section 32-21-1w, was fishing at 1,385 feet. Both of these tests are offsets to the production in the Peasel Pool.

Riley County, in the north central part of the State, is one of the few counties in that area without production. Development of oil and gas in the county has been on a small scale. Two tests recently were completed as dry holes and were abandoned. General Utilities Corp.'s No. 1 Gray, NE cor. SE, Section 30-6-6, was abandoned at 2,535 feet and Younker and others' No. 1 Thierer, NW cor., Section 20-10-7, was abandoned at 2,020 feet.

The wildcat gas well recently completed by the Syndicate Oil & Gas Co. and others in Section 11-18-16w, Rush County, is delivering between 3,000,000 and 4,000,000 feet of gas into the new pipe line recently completed into the area by the Kansas Pipe Line Co. The gas well was completed for 26,000,000 feet a day from a total depth of 3,507 feet. The same operators are drilling in Section 2-18-16w.

The State's deepest test was drilling at 6,527 feet, in the Kinderhook lime with a showing of water. Watchorn Oil & Gas Co.'s No. 2 Morrison, NW cor. NE, Section 20-32-21w, Clark County, is expected to be drilled to the 7,000-foot level.

Reynolds & Unruh and others have announced a new location for a test in the SE cor. NE, Section 16-22-7w, Reno County. A rig is expected to be moved out in a few days. It is located on a block that has been core drilled.

Well May Be Deepened

The Prairie Oil & Gas Co. and Empire Oil & Refining Co.'s No. 2 Ochs, SE cor. NE, Section 23-15-14w, two locations south of the discovery well in that pool, is a small well after being drilled deeper. The attempt to extend the production to the south apparently failed. When the well was swabbed down it made 30 bbls. from the pay at 3,351-70 feet. It may be drilled deeper.

In the north extension of the Voshell Pool, Slick, Pryor & Lockhart's extension well was being completed. It was No. 2 Gratton, SW cor. NW, Section 34-20-3w, McPherson County, and is rated at 1,500 bbls. a day from the Wilcox sand, at a total depth of 3,476 feet, and 10,000,000 feet of gas, which is coming from the chat horizon. The well is bradenheaded. Other new wells in the north end of the pool were Sinclair Oil & Gas Co.'s No. 4 McCurdy, in Section 33-20-3w, swabbing 895 bbls. from the Wilcox sand at a total depth of 3,383 feet. The same company's No. 11 Morehouse, in Section 4-21-3w, pumped 152 bbls. in eight hours.

The new wildcat well in the northwestern part of Rice County is showing for a 150-bbl. well. Shell Petroleum Corp. and others' No. 1 Ploog, C SW SE, Section 33-18-9w, swabbed 253 bbls. in 21 hours from the Silicious lime at 3,249-52 feet. It filled up afterward at the rate of 5 bbls. an hour with 46 gravity oil. Three 250-bbl. tanks have been erected on the lease. It may be drilled deeper.

Blankinship Petroleum Co.'s No. 1 Sloan, SW cor. NW NW, Section 28-20-3, Cowley County, has landed the 5-inch casing at 2,874 feet in the new deep pay sand which was found from 2,874-77 feet. Oil had risen 3,000 feet in the hole the middle of the week. It will be drilled deeper and a swabbing test made.

Butler County

Noble & Jones' No. 1 Oursler, C SW NE, Section 4-23-4, has been abandoned at 2,576 feet. Empire Oil & Refining Co.'s No. 1 Fountain, NE cor. SW, Section 28-26-6, is dry and abandoned at

(Continued on Page 134)

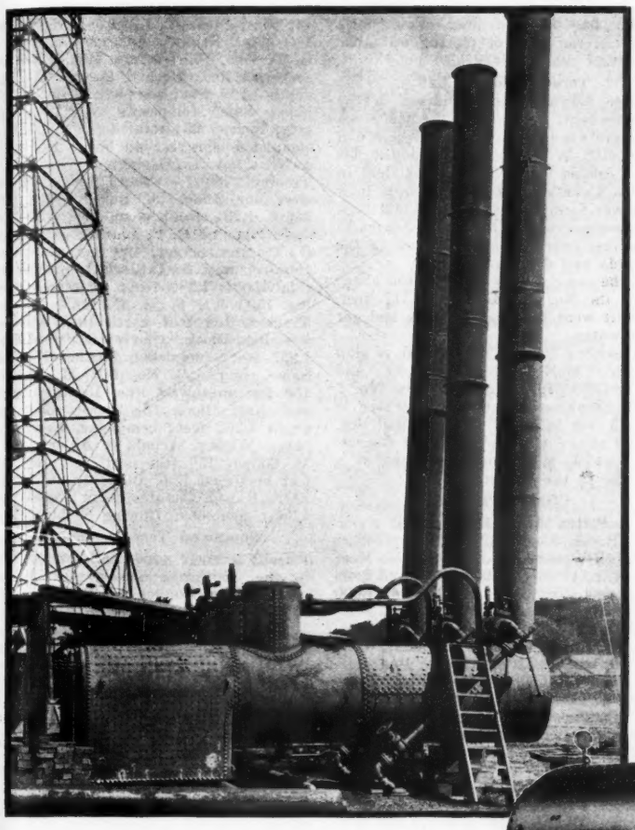
WILDCAT OPERATIONS IN KANSAS

(Descriptions are East unless marked otherwise)

Company, farm and location—	Remarks:
BARBER COUNTY	
Barbara Oil Co.'s No. 1 Hamblin, SW NW Sec. 24-33-13w	Fishing 4,487-4,508 ft.; 30,000,000 ft. gas.
Phillips Pet. Co.'s No. 1 Powell, SE cor. SE Sec. 11-32-10w	Cleaning out 4,409 ft.
BARTON COUNTY	
Slick and Prairie's No. 1 Rude, SW cor. Sec. 11-16-13w	Drlg. 2,025 ft.
BUTLER COUNTY	
Pioneer Pet. Co.'s No. 1 Crist, NW SE Sec. 33-26-4	Drlg. 2,450 ft.
Farrell et al's No. 1 Sutton, NW cor. Sec. 18-28-7	Drlg. 610 ft.
Aladdin Pet. Co.'s No. 1 Metzger, NW SE Sec. 23-28-3	Wilcox 3,000-18 ft.; water; abandoned.
Gypsy Oil Co.'s No. 1 Osborne, NW SE Sec. 22-26-3	Drlg. 1,930 ft.
Joe Liggett's No. 1 Guanther, C SE NE NW Sec. 29-26-7	Drlg. 2,400 ft.
CLARK COUNTY	
Watchorn's No. 2 Morrison, NW NE Sec. 20-32-21w	Drlg. 6,520 ft.
CLAY COUNTY	
Crystal Oil et al's No. 1 Tivier, SW cor. Sec. 19-8-2	Drlg. 1,800 ft.
COFFEY COUNTY	
Ritchey et al's No. 1 Rossenmacher, C SE Sec. 36-22-13	Shut down 2,165 ft.
Roberts et al's No. 1 Hay, SW SE NW Sec. 32-22-15	Drlg. 1,100 ft.
COWLEY COUNTY	
Tom Fine's No. 1 Boyd, NW NE Sec. 32-32-4	Drlg. 1,865 ft.
DICKINSON COUNTY	
Severs et al's No. 1 Lavengood, NE SW Sec. 13-13-2	Drlg. 2,205 ft.
Kruger et al's No. 1 Diche, C NW NE NE Sec. 17-13-4	Shut down 2,935-43 ft.; water
E. N. Morgan's No. 1 Whithair, NW SE Sec. 9-12-1	Drlg. 2,910 ft.
DOUGLAS COUNTY	
Steinbuckel's No. 1 Unknown, SW NE NW Sec. 34-14-21	Shut down 1,100 ft.
Jenkins & Scott's No. 1 Haden, SE NW Sec. 10-12-17	Shut down 1,800 ft.

(Continued on Page 166)

BRODERICK
SUPERHEATED BOILERS



Typical installation at Oklahoma City used by Loffland Brothers Drilling Co.

Maintaining 50 Years' Leadership

Broderick Boilers, famous in every oil field of the world, were the first to adopt Superheaters . . providing dry steam to engines and pumps to give the following advantages:

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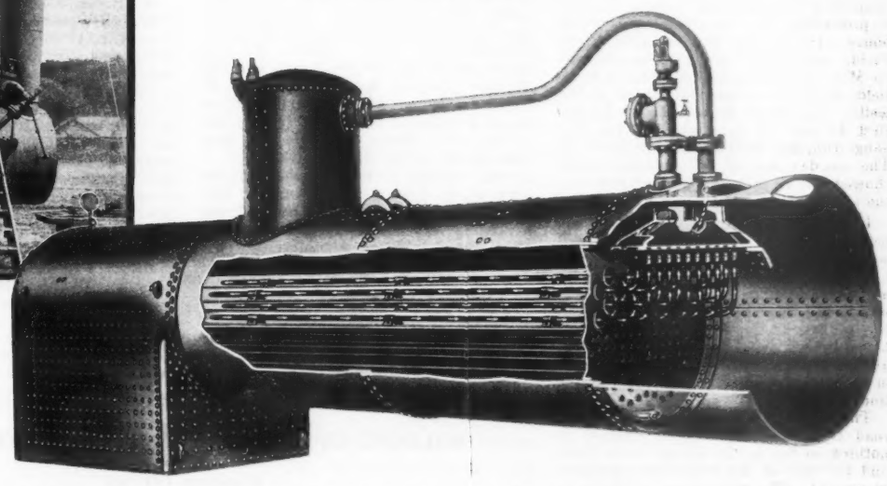
5. No increased size in a portable boiler but increased capacity with smaller boiler.



Ask the National Supply Man for results of tests in the Oklahoma City field. Write us for Bulletin giving record of tests and complete description of superheated equipment and boiler sizes. Address

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ELESCO SUPERHEATERS

Darst Creek's Peak Is 75,248 Barrels

This Figure, Which Is About What Operators Estimated It Would Be, Is Much Less Than Half the Field's Supposed Potential

By B. D. Stevenson
Staff Correspondent, Southwest Texas Fields

SAN ANTONIO, Tex., Aug. 4.—Rumors have been afloat that there might be another voluntary agreement restricting production in the Darst Creek Field, setting the allowable total for the field at about 35,000 bbls. It was around 20,000 bbls. daily until two weeks ago when the agreement blew up and the wells were opened wide.

One of the features of the last week was that the field reached its peak at a little above 75,000 bbls. daily, which is about the figure that operators estimated it would make. It is asserted it could have done a little better but was held to that by the capacity of the pipe lines.

The industry soon will know the relationship between the one-hour gauge as the measure of the potential output of a field and the actual open flow of all the wells at once and flowing all day. It never has been asserted that a field would keep up the rate of flow shown by a one-hour gauge and many have doubted if a field would even go to such a production for even one day of 24 hours. In the case of the Darst Creek Field, the highest potential gauge was on May 15 showing 245,864 bbls. for the field, based on a one-hour gauge of the wells. The gauge made June 30 for the first 15 days of July which is the last gauge run, was 191,063 bbls. for the field. The one-day run of the field last week showed 75,248 bbls., much less than half the supposed potential.

Left wide open there are many who believe that the flow of the field will soon be down to a point where it will not much exceed the latest allowance of 20,000 bbls. daily and that within a short time it will be necessary to pump the wells. There are a few new wells being drilled in the Darst Creek Field at this time. A test is to be made soon of a structure a little to the east of the line of the field.

The hearing in Austin before the Railroad Commission last week resulted in nothing so far as the Darst Creek Field and the rest of the State are concerned at present. The commission has the matter under advisement with a recommendation of the operators for a reduction of 125,000 bbls. for the entire State and recommending that Darst Creek be held to 20,000 bbls. It may be several days before the commission issues an order.

Pettus Field

In the Pettus Field the last week there were several completions that were producers. The Grayburg Oil Co.'s No. 1-A Kimball, the discovery well in the spot 7 miles southwest of the first production at Pettus, is probably a lost hole. It came in an oil well more than a month ago but has had mechanical trouble with some equipment lost in the bottom of the hole and the last reports were that probably nothing more could be done with it. The company is starting a new hole 850 feet west of the No. 1-A. The company Saturday topped sand at 3,546 feet in the No. 1-B Kimball. The location is approximately a quarter of a mile east of the No. 1-A Kimball. This is about the depth where the No. 1-A got it.

In the No. B-1 Kimball the company at once began arranging to set casing without stopping to make a test. The Arkansas Fuel Oil Co. No. 1 Kimball is about two locations north of the Grayburg No. B-1 Kimball and it is below 3,000 feet and drilling. Grayburg's No. 1 Copeland Saturday had a sand at 3,440 feet. The location is about a quarter of a mile west of the Grayburg's No. A-1 Kimball. It is 100 feet high and probably not the same sand. It had merely topped the sand when the report came in and no information was available as to what the sand showed.

In the Pettus Field the features of interest were the completion by Buchanan & Ogden of their No. 1 Block 38 townsite, which came in for 1,000 bbls. daily at 3,915 feet, the S.R.C. Oil Co.'s No. 1 Block 27 townsite for the same amount at 3,903 feet and the Union Producing Co.'s No. 16 Ray, an east offset to the Glasscock Brothers gasoline well. The last named well came in from sand at 3,848-63 feet making about 25,000,000 feet of gas and spraying gasoline just about as the Glasscock Brothers well did. The Union Producing Co.'s No. 15 Ray, an east offset to the Houston Oil Co.'s No. 1 on Block 36 of the townsite, came in at 3,926 feet and gauged 475 bbls., which is about the size well that the Houston Oil got on Block 36.

Laredo District

There were 11 wells completed in the Laredo district in the Escobas Pool and two others in the Killam-Cuellar Pool several miles north of the Escobas. They added about 1,200 bbls. initial production to the Escobas Pool and 150 to the Killam-Cuellar Pool. None of them added much to the territory, but the Wickler, Arnold & Ahler No. 2 M. Garza is the second producer completed in the territory 2 miles south of the discovery well. There were 18 new locations made in the Escobas Pool.

One wildcat in the Laredo territory (wildcat in that it is hunting for new sands) got a showing last week and was arranging to test. It is O. W. Killam's No. 5 Bruni in Block 26, Survey 8, near the town of Bruni, which showed gas and oil at 3,000-3,008 feet. It is running liner and tubing to make a test. It sprayed some oil with 1,000,000 feet of gas in a sand at 2,847-55 feet. This is in a territory where there is gas production at around 2,350 feet and Killam has been drilling some holes deeper in the hope of picking up other sands that will produce oil.

Three Wildcats Fail

Three Edwards lime wildcats in the Balcones fault region failed the past week and were abandoned. Two had shown a little oil. Witherspoon abandoned his No. 1 Adams in the Adams gas field in Medina County. Gas production is in a shallower formation at about 1,000 feet. Witherspoon carried his No. 1 Adams to 2,289 feet, where it was 50 feet in the Edwards and dry.

In the same county Sun Oil Co. abandoned its No. 1 Edgar at 1,317 feet, where it went into the Edwards and got fresh water.

In eastern Bexar County, east of San Antonio, McElreath & Suggett and Wentz Oil Corp. abandoned their No. 1 A. B. Stephens at 1,636 feet, where it was 12 feet into the Edwards and dry. It had shown a little oil in the Georgetown, which had encouraged hope of a producer in the Edwards.

COMPLETIONS

Pettus Area—Bee County

S. R. C. Corp.'s No. 1 B. Hodges (Mitchell), center of Block 37, G. Kerr Survey, total depth 3,903 feet, sand from 3,897 feet, completed, estimated 1,000 bbls. daily.

Jennings-Cuellar—Zapata County

O. W. Killam's No. 22-B Cuellar, 3,640 feet east line, 1,420 feet south line, Survey 277; total depth 1,589 feet; completed for 100 bbls. Same owner's No. 23-C Cuellar, 1,022 feet east of northwest corner, 750 feet north line, Survey 278; total depth 1,575 feet; completed, 50 bbls.

Jennings-Muckelroy—Zapata County

Alamo Drilling & Leasing Co.'s No. 5 Trevino (Blair), total depth 1,250 feet, completed, 150 bbls. Same company's No. 3 Trevino, 510 feet south line, 150 feet west line, Block 1, Survey 66; total depth 1,241 feet; completed, 100 bbls. Allied Gas Co.'s No. 11-A Trevino, Survey 65; total depth 1,249 feet; completed, 100 bbls. Same company's No. 10-A I. G. Trevino, 150 feet east line, 1,350 feet southeast line, Block 6, Survey 65; total depth 1,249 feet; completed, flowing 294 bbls. Same company's No. 12-A Trevino, Survey 65; total depth 1,251 feet; completed, spraying 40 bbls. Edgington & Niles' (A. L. Edgington) No. 6 I. G. Trevino, 750 feet south line, 150 feet west line, Block 26, Survey 412; total depth 1,234 feet; completed, 150 bbls. J. G. Nix and R. F. Blankenship's No. 2 G. T. Montemayor, 490 feet south line, 150 feet west line, Block 1, Survey 64; total depth 1,280 feet; completed, flowing 75 bbls. S. R. C. Co.'s No. 3-A Trevino, 150 feet north line, 150 feet west line, Block 8, Survey 66; total depth 1,253 feet; completed, flowing 150 bbls. Same company's No. 5-B M. Trevino, 150 feet southwest line, 150 feet southeast line, Block 13, Survey 65; total depth 1,262 feet; completed, flowing 75 bbls. Wicker, Arnold & Ahler's No. 2 M. Garza, 150 feet northwest line, 150 feet northeast line, Block 1, Subdivision Zorro Ranch, Comitas grant; total depth 1,365; completed, flowing 50 bbls.

Southwest Texas Production

Daily average production of the pools in the Southwest Texas area for the week ending August 2 follows:

SOUTHWEST TEXAS

Branyon	30
Bruner	20,262
Buchanan	186
Chapman	7,733
Dale	294
Darst Creek	74,550
Kingsville	123
Larremore	32
Luling	9,452
Lytton Springs	787
Manford	360
McMullen	32
Medina	22
Mirando	11,433
Pettus	6,453
Somerset	1,570
Yoast	393
Total	133,701
Week ending July 26	95,906
Increase	37,795

ABANDONED TESTS

Adams Gas Field—Medina County

Witherspoon Oil Co.'s No. 1 Adams, 300 feet north line, 3,200 feet east line, P. E. Durst Survey, total depth 2,289 feet, completed; abandoned.

Darst Creek—Guadalupe County

Penn Oil Co.'s No. 1 State land, 1,300 feet west of west line J. C. Darst Survey, 1,300 feet north-south line, R. Moss 50 acres near southeast corner J. K. Davis Survey; total depth 2,670 feet; abandoned dry.

Pettus Pool—Bee County

G. F. Getty Petroleum Corp.'s No. 2 J. E. O'Connell, center of Block 40, dropped, is location for No. 1. Osage Oil Co.'s No. 1 Maudlin, 155 feet north line, 155 feet east line of east 50 acres of 200-acre tract in the J. Pointevent Survey, total depth 400 feet, temporarily abandoned. Osage Oil Co.'s No. 2 Maudlin, 155 feet north line, 505 feet east line of tract in the J. Pointevent Survey, temporarily abandoned. Jean Patton's No. 1 Billingsley, 155 feet west line, 2,250 feet south line of Billingsley 30 acres in the B. Q. Hadley Survey, dropped from report, is duplicate of Hicks & Young's No. 1 Billingsley. Union Producing Co.'s No. 11 George Ray, 3,200 feet southwest of north corner along northwest line, 3,000 feet southeast at right angles from northwest line in the R. G. Millican Survey; total depth 3,815 feet; abandoned, hole lost. Union Producing Co.'s No. 13 Ray, 900 feet due south of same company's No. 1 Ray, gas well in the George Habber-

(Continued on Page 130)

WILDCAT OPERATIONS IN SOUTHWEST TEXAS

ATASCOSA COUNTY

Company, farm and location—	Remarks:
Frontier Oil Co.'s No. 1 Boynton, 1,000 ft. from S line, 3,700 ft. from E line of N. Flores Sur., 3 miles SW from Somerset Field	T. D. 2,737 ft.; dry and abd.
Frontier Oil Co.'s No. 2 Boynton, 775 ft. SW of Brown-Fuller gas well	Spudded in.
Nute, Walder & Derden's No. 1 J. B. Young, 750 ft. W line, 370 ft. E line of 107-ac. tract in the Wm. Moore Sur.	Location.

BLANCO COUNTY

Ben H. Ashe Pet. Corp.'s No. 1 Glasscock, moving in to drill on leases out of the Rodson block north of Blanco City	Location.
Liles-Adams et al's No. 1 Stanford, 150 ft. to S line, 1,420 ft. to E line of James Stanford No. 155	T. D. 385 ft.; drlg.
McCreary et al's No. 1 Schenling, 900 ft. to SE line, 600 ft. to SE line of J. A. Rouse No. 118 Sur., 4 miles SW from Blanco City	Spudded in and shut down; to complete title work.
J. R. Meeks' No. 1 Walker, Noel Mixon Sur. No. 23, 3 miles N from Blanco City	T. D. 335 ft.; drlg.

BASTROP COUNTY

Judge Batts et al's No. 1 Alexander, 1,670 ft. N of S line, 528 ft. E of W line, Blk. 3, in the W. M. Eastland Sur., 3½ miles NE from Red Rock	T. D. 2,548 ft.; drlg. resumed.
Pacific Oil & Gas Co.'s No. 1 J. Spooner, 300 ft. from N line, 400 ft. from W line in the L. Lavenuz Sur., 4½ miles E from Cedar Creek	T. D. 2,125 ft.; shut down in chalk.
Pacific Oil & Gas Co.'s No. 2 Spooner, 240 ft. from W line, 4,950 ft. from S line 450-ac. tract in the L. Levering Sur., 5 miles E from Cedar Creek	T. D. 650 ft.; dry and anbandoned.
Pacific Oil & Gas Co.'s No. 1 J. M. Litton, 150 ft. N and W lines of tract	Location.
Majestic Pet. Co.'s No. 1 J. M. Breeding, 160 ft. from N line, 1,020 ft. from W line of 200-ac. tract, 940 varas from W line, 1,225 varas from S line of M. Andrews Sur., 13 miles W from Smithville	T. D. 500 ft.; shut down in shale.

BROOKS COUNTY

Houston Oil Co. of Texas' No. 1 Wormser-Holbien, 1,550 ft. S, 2,650 ft. E of intersection of Lisandro Saenz & Manuel Saenz tracts, El Palo & Blanco de Maguellas grant, SW of Lasater discovery gas	Location.
Houston Oil Co.'s No. 2 Wormser, 200 ft. N of CSL, 964-ac. tract in the P. Maguellas Sur.	T. D. 2,792 ft.; drlg.

(Continued on Page 125)

Lenz Wildcat Looks Like Fair Pumper

First of Many Wells in Southwestern Arkansas in Years to Make Important Show of Oil, and Active Protection Buying Begins

By D. H. Bancroft
Staff Correspondent, Louisiana-Arkansas

SHREVEPORT, La., Aug. 4.—Though not yet a completion, C. V. Lenz' and others' wildcat in Miller County, Arkansas, No. 1 Johnson, in Section 24-15-26, is beginning to show by its performance how much of a well it may be expected to prove when standardized. It looks now like a 25 to 50-bbl. pumper. Two more gas wells were completed in the Jackson, Miss., Field. Dick Norton's deep wildcat in northwest Caddo Parish, tried to blow out again from the deep Trinity. The third well in two weeks in the 5,000-bbl. class blew in from the top of the chalk in Zwolle.

A storm that broke a six weeks' heat wave destroyed approximately 75 derricks in the Urania Field of LaSalle and Winn Parishes.

Early in the week Lenz got a 5,000-bbl. tank up for his Miller County wildcat and when the first gauge was taken it had 10 inches of oil in it. Unfortunately, there was no check on when it was turned into the tank so the gauge didn't give much information. Then it was cut out of the tank and into the pit for a few hours, at the end of which time, it was figured it was flowing 30 bbls. per day. Cut back into the tank again it would not flow and a bailer was sent down for three trips. It still would not flow, so now Lenz is figuring on standardizing it. There is no gas or water.

There has been protection buying by Lenz and other lease owners, Arkansas Natural Gas Co.'s 200 acres northeast of the well for $3 to $5 per acre being among the purchases by big companies. Among the half hundred or so wildcats drilled in southwestern Arkansas in the last few years, this is the first to make any important show of oil.

Mississippi's two new gas wells, making nine in all, were Love Oil & Gas Co.'s No. 1 Gordon, in the SW cor. SW NW, Section 8-5-1e, Hinds County, estimated at 2,000,000 feet of gas from 2,457-59 feet, total depth 2,472 feet, and Pearl River Oil & Gas Co.'s No. 1 Marter, in the SW NW, Section 12-5-1e, Rankin County, estimated at 15,000,000 feet of gas in 6 feet of chalk, total depth 2,478 feet. Oscar Brown's No. 1 Riverside, SE SW, Section 23-6-1e, Hinds County, an old well formerly carried as Hennessee and others', is dropped from the field report as a dry hole at 1,050 feet. With approximately 200,000 feet (open flow) of gas available, the question before operators in the Jackson District now is to find a market for their production and it is understood that negotiations are under way with the Southern Natural Gas Co. to take it for a lateral from the Louisiana-Atlanta main line serving Jackson and other communities in southern Mississippi.

Three Wells Starting

Three new jobs appear in the week's drilling report: Love Petroleum Co.'s No. 1 Dreyfus, in the NW, Section 2-5-1e, a derrick; Miss-Tex Oil Co.'s No. 1 Negro Fair Association, in the SW cor. NW SE, Section 28-6-1e, and Universal Gas Co.'s No. 1 Sharbrough, in the SW SE, Section 28-6-1e, all in Hinds County, on the outskirts of Jackson. Jackson Oil & Gas Co.'s No. 1 Capital Land & Investment Co., in Section 29-6-1e, Hinds County, was abandoned in the chalk rock at 2,610 feet after testing salt water.

Dick Norton's No. 1 Hill, Section 33-23-16, Caddo Parish, was getting ready to core at 5,500 feet when it blew drilling mud half way up the derrick, but the threatened blowout was prevented by pumping heavy mud against it. This was sufficient to hold it in while cutting a 10-foot core and it was to be bailed. The well made a similar show of gas in 40 feet of oolitic lime, 5,280-5,300 feet, and cemented 6⅝-inch. If it makes a commercial well of either sort—a test at 5,400 feet gave a slight show of oil—it will be the first mile deep producer in this territory. Falcon Oil Co.'s No. 4 Nunnaly, Section 29-20-15, Mooringsport district, made a 50-bbl. pumper, total depth 2,340 feet, and The Texas Company's No. 4 Leonard fee, NW SE, same section, made the same size producer from 2,350 feet.

Pleas Hardwick has about completed a block of 6,500 acres, extending north and west from the northwest corner of Shreveport city limits, in Section 28-18-14, for T. B. Slick, on which Slick is to drill a 5,000-foot test beginning on or before October 1.

Good Well in Zwolle

The third big well in the top of the chalk in Zwolle in 10 days was A. H. Tarver and Shreveport-El Dorado Pipe Line Co.'s No. 3 Sabine State Bank, in the SW NE, Section 26-8-12. Top of the chalk was at 2,400 feet and total depth 2,426 feet, the well flowing 1,000 bbls. through a quarter-inch choke and estimated good for 5,000 bbls. wide open. It is one location east of Tarver's No. 2 Sabine State Bank, which pumped 45 bbls. from 2,327 feet. Development in this section of Zwolle—approximately a mile north of nearest production, is led off by Loring Oil Co.'s No. 1 Schull, in Section 26-8-12, shut down at 2,600 feet, and No. 1 Schuffert, in Section 27-8-12, a derrick, both south offsets to producing wells, one of which is a 3,000-bbl. producer from the top of the chalk. Loring has temporarily abandoned No. 5 Bowman-Hicks, in Section 34-8-12, at 4,170 feet, in sandy lime and No. 1 Peavy-Wilson, a wildcat south of Blue Lake production, in Section 21-6-13, got two fourbles of salt water on a drill stem test at 4,470-4,519 feet, and is going deeper. Lohman & Walker's wildcat, in Section 21-7-11, No. 1 Hubley, had a small gas blow out from 2 feet of sand, total depth 1,311-13 feet, and is setting 8-inch on the bottom.

Arkansas- Louisiana Pipe Line Co.'s No. 1 Whitney, Section 28-10-14, a wildcat just under the DeSoto Parish line and about 12 miles west of Pleasant Hill production, got a small show of oil, gas and salt water on drill stem test at 3,091-3,106 feet and is drilling. A. C. Glassell has location offsetting a 5,000-foot test by Arkansas Fuel Oil Co. some time ago for No. 1 Logan Oil Co. in the SW NE, Section 23-10-13, just west of Pleasant Hill production. H. E. Granville's No. 1 Parrott, in the NE NW, Section 31-8-12, Zwolle, pumped 11 bbls., total depth 2,520 feet.

Daily average runs from the field fell off 900 bbls. from last week's figures, practically all of it being in the light oil districts. Caddo light runs declined 165 bbls., Haynesville 200, and Holly 220 bbls. Zwolle runs increased 250 bbls. under pressure of three new wells in the 5,000-bbl. class, and Sarepta-Carterville shipments were 170 bbls. more than last week. Smackover heavy was off 270 bbls. and Caddo heavy 300 bbls. Daily average runs from the field were:

NORTH LOUISIANA

Caddo, light	9,560
Caddo, heavy	2,615
Homer	3,525
Haynesville	4,600
DeSoto-Red River	5,090
Elm Grove	460
Bellevue	610
Cotton Valley	2,050
Urania	5,200
Pleasant Hill	540
Sarepta-Carterville	3,120
Zwolle	5,250
Holly	1,030
Total	41,650
Last week	42,140
Decrease	490

ARKANSAS

El Dorado	4,100
Smackover, light	5,095
Smackover, heavy	37,280
Stephens	925
Nevada County	1,030
Lisbon	960
Champagnolle	4,400
Bradley	65
Mount Holly	100
Urbana	1,085
Total	55,040
Last week	55,445
Decrease	405
Both States	96,690
Last week	97,585
Decrease	895

Well to Have Test

W. M. Coates and others' No. 1 Collins, in Section 28-9-10, Natchitoches Parish, a townsite well at Marthaville, had a small show of gas in sandy lime at 2,234 feet and is arranging for a test. J. C. McConnell, J. W. Cooper and others have assembled 6,000 acres in the southwest quarter of Township 11, Range 10, and have derrick up in the NW SW, Section 35-11-10, for a 3,500-foot test. Conway Stroud and others have turned 5,000

(Continued on Page 133)

WILDCAT OPERATIONS IN LOUISIANA-ARKANSAS

NORTH LOUISIANA

AVOYELLES PARISH

Company, farm and location—	Remarks—
R. E. Tippett's No. 1 Chateline, NE NE, Sec. 34-1n-3e	Cored S.W. sand 3,140-47 ft.; drlg. S.W. sand 3,400 ft.; S.D. 3,410 ft.

BIENVILLE PARISH

Ark.-La. P. L. Co.'s No. 1 Graves, 660 ft. S, 878 ft. W, NE cor. NW, Sec. 22-16-10	Rig up.
W. A. Nichols et al's No. 1 McDermott, 660 ft. S, 660 ft. W, NE cor. NE NE, Sec. 28-18-6	D.S. test 2,281-2,358 ft.; 1 fourble mud; 10 ft. oil; S.D. for csg.

BOSSIER PARISH

Andrews & Daveline's No. 1 Nattin, 100 ft. N, 250 ft. W. C. Sec. 15-22-14	Cored oil sand 1,132 ft.; drlg. shale 1,460 ft.
Autrey Oil Co.'s No. 1 Johnson, 1,120 ft. N, 200 ft. E, SW cor. NW, Sec. 34-19-11	Began drlg. July 25; S.D. for fuel 60 ft.
Autrey Oil Co.'s No. 1 McDade, 200 ft. S, 200 ft. E, C. Sec. 28-19-11	Derrick.
Triangle Drlg. Co.'s No. 1 Bollinger, C SE SE, Sec. 36-23-13	Began drlg. July 25; drlg. 350 ft.

CADDO PARISH

Falcon Oil Co.'s No. 1 Oden, NE cor. SE NE, Sec. 19-19-14	Reported June 4 dry and abd. by N. Pharis et al; O.W.D.D.; arranging to deepen; old T.D. 2,409 ft; drlg. 2,475 ft.
L. B. Mawk's No. 1 Swann, 440 ft. N, 200 ft. E, SW cor., Sec. 23-21-14	S.D. for fuel; T.D. 700 ft.
R. W. Norton's No. 1 Hill, 630 ft. N, 1,260 ft. W. SE cor. NE, Sec. 33-23-16	40 ft. Oolitic lime showing gas; cmtd. 6⅝-in. 5,165 ft.; tested dry 5,315 ft. and 5,400 ft; drlg. hard lime 5,460 ft.

CATAHOULA PARISH

Nick Barbee et al's No. 1 L. McGraw, 150 ft. N, 150 ft. W, SE cor. SW NW, Sec. 30-10-9	S.D. 1,070 ft.
National O. & G. Co.'s No. 1 Kirkland, 585 ft. E, 495 ft. N, SW cor., Sec. 35-9-1n	S.D. 2,412 ft.

(Continued on Page 96)

LOUISIANA-ARKANSAS PROVEN AREAS

NORTH LOUISIANA

BOSSIER PARISH—CARTERVILLE

Company, farm and location—	Remarks—
Ark. Fuel Oil Co.'s No. 2 Bain, 300 ft. S, 300 ft. E, NW cor. SW, Sec. 31-23-11	Cmtd. 6⅝-in. 3,140 ft; bailing to test 9-ft. sand; T.D. 3,163 ft.
Ark. Fuel Oil Co.'s (formerly Muslow Oil Co.'s) No. 1 Floyd, 990 ft. S, 330 ft. W, C, Sec. 25-23-12	W.O.S.R. 3,176 ft.
Del.-La. Dev. Co.'s No. 6 Bollinger, 330 ft. S, 220 ft. W, NW cor., Lot 17, in Lot 16, Sec. 31-23-11	Full oil; W.O.S.R.; 15 ft. broken sand; T.D. 3,217 ft.
Greenwood Prod. Co.'s No. 2 Bollinger, 990 ft. W, 330 ft. S, NE cor. NE SE, Sec. 36-23-12	Cmtd. 6⅝-in. 3,138 ft.; 5 ft. sand; W.O.S.R. 3,173 ft.
Gulf Ref. Co.'s No. 1 Allums, 990 ft. N, 330 ft. W, SE cor., Sec. 36-23-12	Sidetracking D.S. 2,885 ft; T.D. 3,203 ft.
Magnolia Pet. Co.'s No. 2 Matlock, 330 ft. S and W, NE cor. SE SW, Sec. 26-23-12	W.O.S.R. 3,188 ft.
Magnolia Pet. Co.'s No. 3 Matlock, 330 ft. N, 330 ft. W, SE cor. SE SW, Sec. 25-23-12	Cmtd. 8⅛-in. 3,132 ft; T.D. 3,179 ft.; arranging to deepen.
Magnolia Pet. Co.'s No. 2 Roberson, 330 ft. S, 330 ft. E, NW cor. SW NE, Sec. 26-23-12	D. S. test 3,132 ft.; 5 joints oil and gas show; plugged back to 3,900 ft; arranging to shoot 3,940-50 ft.
Nat. Drlg. & Prod. Co.'s (was Lide et al's) No. 1 Matlock, 2,970 ft. S, 990 ft. E, NW cor., Sec. 26-23-12	Hole full S.W; T.A. 3,181 ft.
Palmer Corp.'s No. 2 Roberson, 330 ft. N, 330 ft. E, SW cor. NW NE, Sec. 26-23-12	Derrick.
The Texas Co.'s No. 1 Pine Woods Lbr. Co., 1,650 ft. S, 300 ft. E, NW cor., Sec. 25-23-12	Began drlg. July 29; drlg. 100 ft.
The Texas Co.'s No. 2 Hy Rose, 965 ft. E, 425 ft. N, C, Sec. 31-23-11	O.W.D.D.; began drlg. July 22; drlg. shale 3,147 ft.; old T.D. 3,075 ft; cmtd. 4½-in. 3,148 ft; T.D. 3,174 ft.

(Continued on Page 100)

The Answer to many Tubing Problems

NATIONAL-SEAMLESS EXTERNAL UPSET TUBING

IN upsetting, the end of the tubing is made sufficiently heavy so that the joint is the stiffest part of the pipe and any bending action is forced into the body of the tubing and away from the joint. The added thickness also gives additional wearing metal at the joint and offers greater resistance to the crushing action of the coupling—an important factor where tubing is made up and broken down several times.

NATIONAL A.P.I. External Upset Tubing, being made of seamless material, eliminates any possibility of failure due to opening at the weld, which is often caused by the concentrating of wear or cutting action of sucker rods at this part of the pipe.

Unusually long strings of tubing or especially severe conditions of service require a high factor of safety. The preference given this product under such conditions clearly indicates that the answer to the more important tubing problems has been—

NATIONAL Seamless Tubing

NATIONAL TUBE COMPANY

Frick Building, Pittsburgh, Pa.

SUBSIDIARY OF UNITED STATES STEEL CORPORATION

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American Bridge Company	Carnegie Steel Company	Illinois Steel Company	The Lorain Steel Company
American Sheet and Tin Plate Company	Cyclone Fence Company	Minnesota Steel Company	Tennessee Coal, Iron & R. R. Company
American Steel and Wire Company	Federal Shipbuilding and Dry Dock Company	National Tube Company	Universal Atlas Cement Company

Pacific Coast Distributors—United States Steel Products Co., Columbia Department: San Francisco, Los Angeles, Portland, Seattle, Honolulu. *Export Distributors*—United States Steel Products Co., New York City

New Light Oil Field Seen in Wyoming

Midway Dome Test Drilled Under Group Development Plan Cores 30 Feet of Saturated Sand Believed to Be Second Wall Creek

By Tolbert R. Ingram
Staff Correspondent, Rocky Mountain Area

DENVER, Colo., Aug. 4. — Wyoming took first place in the news from the Rocky Mountain area this week when the deep test being drilled on the Midway Dome south of the Salt Creek Field by the Midwest Refining Co. under a group development plan approved by the Department of the Interior cored 30 feet of what is believed to be the second Wall Creek sand and found it saturated. The Salt Creek deep test is drilling in the Deadwood formation. A 125-bbl. well was completed by the Bessemer Oil Co. in the Poison Spider district, and three completions were reported in the Osage district and one for 180 bbls. in Oregon Basin. The Ohio Oil Co.'s discovery well on the Byron Dome averaged 25 bbls. an hour before being shut in.

Eight new locations were made in the Hobbs Pool, in New Mexico, bringing the number of locations, rigs and drilling wells up to 63. No completions were reported, but several wells are close to the pay. The Jal area in Lea County scored in the Midwest Refining Co.'s No. 34 Farnsworth which flowed at the rate of 675 bbls. per day from the top of the pay. The Ohio Oil Co.'s test in the Eunice area is showing oil and gas.

Colorado had one failure, three new locations and two major tests which have reached the objective. J. W. Merritt, of Tulsa, is starting a test east of Denver near a well drilled several years ago which had oil and gas shows that might have been commercial had not the rotary bit sealed the sands. The Magnolia Petroleum Co.'s Piceance Creek test is being plugged back and will be completed as a gas well and the Producers & Refiners' Pole Mountain wildcat is plugging.

NEW MEXICO

Hobbs Area—Lea County

Eight new locations in the Hobbs Pool bring the total number of active operations, including locations, rigs and drilling wells, up to 63. Several of these broaden out the area being drilled on three sides of the structure. Four made by the Gypsy Oil Co., the Texas Pacific Coal & Oil Co., the Shell Petroleum Corp., and the Empire Gas & Fuel Co. are half a mile north of the Shell's No. 1 McKinley and the Texas Pacific's No. 1-G State, which are the farthest to the northwest of any producers so far completed. These are as follows: Texas Pacific's No. 2-G State, NE cor. SE, Section 24-18-37; Shell's No. 7 McKinley, NW cor. SW, Section 19-18-38; Gypsy's No. 1 Graham, SE cor. NE, Section 24-18-37; and the Empire's No. 2 Boon-Hardin, SW cor. NW, Section 19-18-38. The four are offset to each other and mark the northwest limits of present operations.

Two locations which are about half a mile to the northeast of the Tidal Oil Co.'s No. 1 Grimes, the biggest producer in the field, and which extend the area being drilled about half a mile in that direction, are the Prairie Oil & Gas Co.'s No. 1 Grimes, SW cor. NW, Section 28-18-38, and the Shell Petroleum Corp.'s No. 2 Grimes, NW cor. SW, Section 28-18-38. The other locations are the California Co.'s No. 3 State, SE cor., Section 29-18-38; and the Humble Oil & Refining Co.'s No. 10 Bowers, NE NW SW, Section 29-18-38.

While several wells are practically on top of the pay, no completions were reported last week. Two wells at interesting stages are to the east and north of production and the logs indicate that the formations dip readily in those directions. These are the Landreth Production Co.'s No. 1 State, SW cor. SE, Section 7-18-38, 2½ miles north of producers, and Hobbs High, Inc.'s No. 1 Tatum, NW SW SW, Section 35-18-38, about the same distance to the east of the nearest producers. Both appear to be running about 300 feet low. The Landreth well is bottomed at 4,144 feet in anhydrite and lime, and the 6⅝-inch is cemented at that depth. At 4,050-60 feet, it made 1 bailer per hour of salt water. The Hobbs High well is drilling at 3,383 feet in anhydrite and at 3,360 feet salt water rose 500 feet in the hole in 24 hours.

One of the "air" pockets encountered in most of the wells in the northern part of the field at around 2,500 feet, which frequently cause trouble if anything happens to prevent the gas exhausting itself, was found in the Gypsy Oil Co.'s No. 4 Grimes, NE cor. NW, Section 32-18-48, at 2,150 feet. The pressure blew rocks and pebbles from the size of hickory nuts up to 6 inches in diameter more than 100 feet into the air, splintered 6-inch planks in the derrick and stripped electric light wires from the steel. It was one of the largest pockets so far struck in the field.

Drilling Operations

The Amerada Petroleum Corp.'s No. 1-A State, SW NW NE, Section 32-18-38, is bottomed at 3,938 feet in lime where the 7-inch was cemented, and No. 2-A State, NE cor., Section 32-18-38, is digging cellar. Same company's No. 1-B State, SW SE NW, Section 29-18-38, is bottomed at 210 feet in the red beds where the 12½-inch was cemented. It spudded on July 15 and is rigging up rotary. The Amerada's No. 3 McKinley, SW NW NW, Section 30-18-38, cemented the 9⅝-inch on bottom at 2,647 feet, and its No. 2-B State, SE SW NE, Section 29-18-38, cemented the 12½-inch at 222 feet and is rigging up rotary.

The Atlantic Oil Producing Co.'s No. 1 State, NE cor., Section 6-19-38, is bottomed at 2,264 in salt and shale and stopped to recement the 12½-inch.

The California Co.'s No. 1 Grimes, NW SE SE, Section 29-18-38, is standing with the 7-inch cemented at 3,910 feet in lime, and its No. 2 State, NE SW SE, Section 29-18-38, is drilling at 1,541 feet in anhydrite. The top of the anhydrite was at 1,531 feet.

The Continental Oil Co.'s No. 1-A State, SE NW SE, Section 29-18-38, is drilling at 1,750 feet, and its No. 1-B State, C SW SW, Section 33-18-38, is drilling at 2,430 feet in salt. The same company's No. 2-B State, NW cor. SW, Section 33-18-38, is drilling at 100 feet, and its No. 3-B State, SW, Section 33-18-38, has completed cellar. The Continental's No. 3-A State, NE NW SE, Section 29-18-38, is rigging up, and its No. 2-A State, SE cor. SW, Section 29-18-38, is digging cellar.

The Empire Gas & Fuel Co.'s No. 2 Fowler, NW cor. NE, Section 31-18-38, is rigging up rotary, and its No. 1 Boon-Hardin, SE cor. NW, Section 19-18-38, has cellar completed.

George F. Getty, Inc.'s No. 4 McKinley, NW cor. NE, Section 30-18-38, is drilling out plug after cementing the 9⅝-inch at 2,754 feet. It bottomed the salt at 2,550 feet. The same firm's No. 5 McKinley, NE cor., Section 30-18-38, is moving in materials.

Gypsy Gets Oil Show

The Gypsy Oil Co.'s No. 2 Grimes, NE SE NW, Section 32-18-38, is drilling at 3,475 feet and had a show of oil at 3,142-3,215 feet, and its No. 3 Grimes, NE cor. SW, Section 32-18-38, cemented the 9-inch at 2,738 feet. Its No. 4 Grimes, NE cor. NW, Section 32-18-38, is bottomed at 2,155 feet and trying to circulate, and its No. 5 Grimes, SW cor. Section 32-18-38, is drilling at 900 feet.

The Humble Oil & Refining Co.'s No. 2-A Bowers, NW cor. SE, Section 30-18-38, is coring at 3,912 feet in lime, and its No. 3 Bowers, SW cor., Section 29-18-38, is shut down at 3,732 feet in anhydrite for boiler repairs. Its No. 4 Bowers, SE cor., Section 30-18-38, is drilling at 3,655 feet in anhydrite, and its No. 5 Bowers, NW NE SE, Section 30-18-38, is drilling at 3,297 feet in anhydrite. It had oil and gas at 3,167-71 feet, oil at 3,181-88 feet and an increase in oil and gas at 3,240-50 feet. Humble's No. 8 Bowers, SW cor. SE, Section 30-18-38, is rigging up rotary, and its No. 9 Bowers, SE SW NW, Section 29-18-38, is drilling at 226 feet in the red beds.

The Landreth Production Co.'s No. 1-B State, SW cor. NW, Section 33-18-38, is drilling at 3,253 feet in anhydrite and lime. It had oil at 3,143-48 feet and oil and gas at 3,178-84 feet. Same company's No. 2-B State, CSL NW, Section 33-18-38, is rigging up rotary.

The Midwest Refining Co.'s No. 8 State, C NW NW, Section 10-19-38, is drilling at 3,330 feet in anhydrite, and its No. 8 State, C NW NW, Section 4-19-38, had a show of oil at 3,164-69 feet. Its No. 33 Byers, SE SW NE, Section 4-19-38, is drilling at 3,845 feet in anhydrite and lime, and its No. 26 Terry, C SE SE, Section 9-19-38, is rigging up cable tools. The Midwest's No. 33 State, SE SW NW, Section 4-19-38, is standing cemented at 2,785 feet, and its No. 4 State, NE NW SE, Section 4-19-38, is rigging up rotary. Same company's No. 26 State, C SE NW, Section 4-19-38, is drilling at 1,550 feet in anhydrite. The top of the anhydrite was at 1,420 feet. The Midwest's No. 3 State, NW NE SW, Section 4-19-38, is drilling out plug at 2,779 feet in anhydrite and lime, and its No. 26 State, C SE SE, Section 4-19-38, is drilling at 3,340 feet in anhydrite and lime.

The Ohio Oil Co.'s No. 2 State, SE cor. NW Section 30-18-38, has completed cellar, and its No. 2 State-Northrup, C SE SE Section 32-18-38, is drilling at 3,545 feet in lime and anhydrite and had an oil show at 3,151-58 feet. Same company's No. 3 State-Northrup, NE cor. SE Section 32-18-38, is drilling at 3,750 feet in anhydrite, and its No. 4 State-Northrup, NW cor. SE, Section 32-18-38, is bottomed at 300 feet, where it cemented the 15½-inch. It spudded on July 20.

Shell's Activities

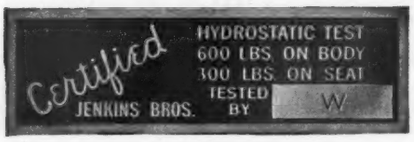
The Shell Petroleum Corp.'s No. 1 Berry, SE cor. Section 31-18-38, is bottomed at 242 feet in the red beds and is running the 12½-inch. It spudded on July 17. Same company's No. 2 State, NW SW NE Section 32-18-38, is drilling at 3,838 feet in lime, and its No. 1-B State, NW cor. Section 33-18-38, is a cellar. Shell's No. 3-A State, SE cor. NE Section 32-18-38, is drilling out plug after cementing the 9⅝-inch at 2,755 feet in lime, and its No. 4 State, SW cor.

GULF PORT SHIPMENTS IN JUNE SHOW INCREASE OF 411,909.60 BBLS.

HOUSTON, Tex., July 28. — Shipments of crude and refined products from Gulf Coast ports during June totaled 19,394,231.50 bbls. This was an increase of 411,909.60 bbls. over shipments during May. The increase was due chiefly to a gain in refinery product movements both coastwise and export. Shipments of crude coastwise reflected a material decline. Shipments by companies and ports were:

Company and port—	Coastwise May	Coastwise June	Export May	Export June
REFINED				
Standard Oil Co. (La.):				
Baton Rouge	852,726.00	867,647.00	323,151.00	769,223.00
The Texas Company:				
Port Arthur	1,562,624.00	1,212,575.00	83,248.00	415,274.00
Gulf Refining Co.:				
Port Arthur	2,360,967.99	2,142,530.29	75,655.47	262,359.09
Magnolia Petroleum Co.:				
Beaumont	1,678,858.26	1,741,640.52	*	*
Humble Oil & Refining Co.:				
Baytown	1,581,099.61	1,641,385.27	1,562,210.22	1,733,214.58
Atlantic Oil Producing Co.:				
Atreco	157,150.34	131,594.27		
Pure Oil Co.:				
Smiths Bluff	385,186.51	575,477.85		
Shell Petroleum Corp.:				
Houston	†	447,493.53	†	
Total refined	8,578,612.71	8,760,343.73	2,044,294.99	3,180,070.67
CRUDE				
Standard Oil Co. (La.):				
Baton Rouge	397,380.00	125,534.00	52,891.00	56,309.00
The Texas Company:				
Port Arthur	382,149.00	81,307.00		
Gulf Refining Co.:				
Port Arthur	481,678.48	255,500.28		
Magnolia Petroleum Co.:				
Beaumont	1,091,706.35	*798,971.29		
Humble Oil & Refining Co.:				
Texas City	753,079.00	669,697.00		
Ingleside	98,758.00	235,923.00		
Baytown	272,219.00	118,783.00		
Harbor Island	2,299,978.00	2,232,849.00		
Neches	60,011.00	60,276.00		
Atlantic Oil Producing Co.:				
Atreco	904,401.36	786,656.92		
Beaumont	126,366.80	77,049.24		
Pure Oil Co.:				
Smiths Bluff	561,909.15	694,653.70		
Sun Oil Co.:				
Sabine Pass	886,437.00	768,471.00		
Shell Petroleum Corp.:				
Houston	†	*491,336.67		
Total crude	8,306,523.14	7,397,508.10	52,891.00	56,309.00
Total shipments	16,885,135.85	16,157,851.83	2,097,185.99	3,236,379.67

*Magnolia Petroleum Co. and Shell Petroleum Corp. make no distinction in reports between coastwise and export shipments. †No report for May.



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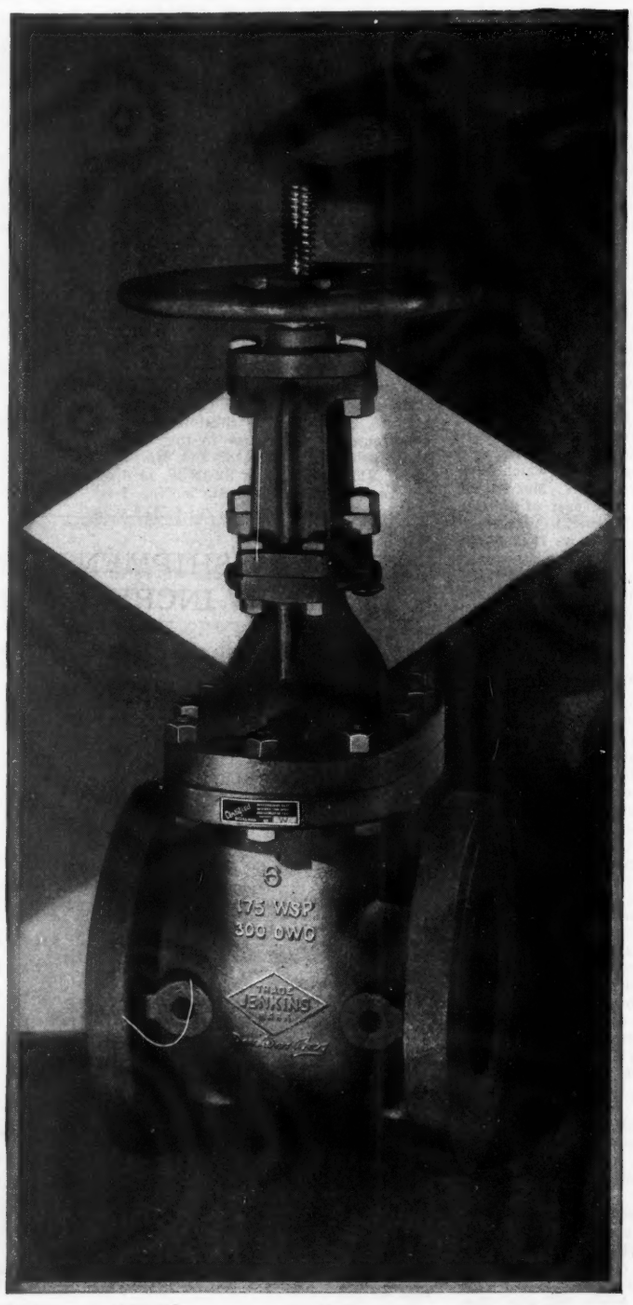

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NE Section 32-18-38, is drilling at 475 feet in the red beds. Same company's No. 2 McKinley, SW cor. SE Section 19-18-38, is drilling at 1,369 feet in the red beds, and its No. 1 Grimes, SW cor. Section 28-18-38, has cellar completed. Shell's No. 3 McKinley, SE cor. Section 19-18-38, is building rig, and its No. 5 McKinley, NW cor. SE Section 19-18-38, is rigging up rotary. Its No. 6 McKinley, NE cor. SW Section 19-18-38, is rigging up rotary, and its No. 4 McKinley, SE cor. SW Section 19-18-38, cemented the 12½-inch at 246 feet in the red beds. It commenced spudding July 18.

The Skelly Oil Co.'s No. 1 Fowler, NW cor. Section 31-18-38, is rigged and ready to spud.

The Sun Oil Co.'s No. 1 McKinley, C NE NE Section 5-19-38, cemented the 7-inch at 3,936 feet in lime.

The Texas Production Co.'s No. 1-C State, NE cor. Section 25-18-37, is bottomed at 3,970 feet and waiting for cement to set, and its No. 1 McKinley, NE NW SW Section 4-19-38, is fishing at 2,867 feet. Same company's No. 1 Selman, NW cor. SE Section 15-19-38, is drilling at 3,918 feet in lime.

The Tidal Oil Co.'s No. 1 Hardin, SW cor. NE Section 19-18-38, is drilling at 240 feet in the red beds. It spudded July 18. Same company's No. 2 Grimes, SW SE NE Section 29-18-38, is drilling at 175 feet in red sand. It spudded July 19.

Jal Area—Lea County

The Jal area, in the southeastern part of Lea County, where the first important discovery in that county was made several years ago, but which has shown little activity recently on account of the concentration of drilling in the Hobbs Pool, came in for attention this last week when the Midwest Refining Co. brought in a producer. Its No. 34 Farnsworth, SW SE SE Section 13-26-36, topped the pay at 3,235 feet, which is also the total depth. It was shut in for storage and later was opened for a test. In a 21-hour test it flowed at the rate of 675 bbls. per day, making heads every three hours. It also made between 1,000,000 and 2,000,000 feet of gas.

The well is a mile to the northwest of the Continental Oil Co.'s No. 1 Eaves, which was completed in 1929 as a gas well; three-fourths of a mile south of the Midwest's No. 13 Farnsworth, a gasser, and a little more than a mile north of the Continental's No. 1 McCallister, which averaged 40 bbls. on the swab after plugging back to shut off water.

There has been no drilling in the meantime in the area between the wells mentioned. The only other well drilling in the Jal area is the Midwest's No. 19 Farnsworth, NW SW SW Section 14-26-37, on the east side, which is making hole at 2,969 feet with not important shows.

Eunice Area—Lea County

The Ohio Oil Co.'s No. 1 State-McDonald, SW NW SW Section 15-22-36, is showing up favorably and will be closely watched during the next few days. It is drilling at 3,358 feet in lime and anhydrite and at 3,290-3,300 feet it showed considerable oil, followed by gas at 3,306-12 feet. It is located 2 miles to the northeast of the Continental Oil Co.'s No. 1 William Meyers, which showed heavy gas pressure at 3,750 feet, but which is still uncompleted due to an unusually bad fishing job, and 3½ miles southeast of the Empire Gas & Fuel Co.'s No. 1 Closson, completed a few months ago as an oil well after plugging off bottom water.

The Tidal Oil Co.'s No. 1 Coleman, SW cor. NE Section 17-21-36, is drilling 1,060 feet in the red beds. It spudded on July 18.

Cooper Area—Lea County

The Texas Pacific Coal & Oil Co.'s No. 5-A State, NE Section 20-23-36, cemented the 7-inch on bottom at 3,636 feet in lime.

Eddy County

The first carload of road oil from the State Oil & Refining Co.'s plant at Dayton was shipped to a state highway project near Clovis the past week. This company recently purchased the Sullivan refinery at Dayton and after rehabilitating it began running on crude from the Twin Mounds Pool which is delivered from the Getty wells by truck. George F. Getty, Inc., the operator at Twin Mounds, is drilling a deep test in its No. 5 Dooley, NW SE NW, Section 23-30-29, which is bottomed at 500 feet. Lockhart & Co.'s No. 2-X Parke, NW NW, Section 23-17-30, Maljamar area, is bottomed at 2,900 feet and trying to straighten a crooked hole. Flynn, Welch & Yates' No. 2 Stevens, NE SW Section 13-17-30, which has been delayed for several months at 3,250 feet by a bad fishing job, is trying to sidetrack tools. Same firm's No. 58 State, SW Section 19-18-28, Artesia area, is drilling at 1,500 feet.

Rio Arriba County

The San Juan Petroleum Co.'s No. 1, NE cor. SE Section 14-30-7w, Gobanador area, has resumed after being idle for some time and is drilling at 275 feet in a test to the Dakota.

San Juan County

The Rio Grande Development Co.'s No. 2 Lanier, SE NW, Section 9-29-11, Aztec district, had some uncommercial shows of oil and gas in the Farmington sands and is preparing to set the 6⅝-inch at 1,280 feet to continue to the Picture Cliff.

COLORADO

Arapahoe County

J W. Merritt of Tulsa and associates are erecting derrick for a cable tool test in Arapahoe County, east of Denver, which is expected to attract more than ordinary attention on account of the circumstances under which the well will be drilled and the general interest in all wildcats in eastern Colorado. The well, which will be on Union Pacific railroad land, has been spotted in the SE cor. NW Section 17-5s-64, on the Watkins Dome. It is being rigged to go 3,500 feet, or more, if necessary. The location is only a few hundred feet from A. A. Rollestone's No. 1 Hog Ranch, SW Section 17-5s-64, which was drilled in 1925 and abandoned at 2,315 feet.

The history of the Rollestone test, which was well known to Mr. Merritt and his associates, is the direct cause for the leasing up of the block and the decision to drill another well. Mr. Merritt discovered the structure in 1923 and recommended it to Mr. Rollestone, who then was doing considerable wildcatting in Colorado.

Mr. Merritt mapped the structure the following year and spotted the Rollestone well. The test encountered oil and gas showings in two sands between 1,300 and 1,600 feet. It was drilled with a rotary outfit and Merritt, who received daily reports on the well and samples of the cuttings, was never satisfied with the methods followed in testing the sands and is convinced that a standard cable tool test, if similar showings are encountered, will yield production in paying quantities. The oil and gas showings are said to have been found in sands in the Fox Hills, or lower Laramie.

Morgan County

The Indian Territory Illuminating Oil Co.'s No. 1 State, NE NE Section 16-1n-57, Fort Morgan anticline, is drilling below 2,400 feet and at this depth had not yet picked up the Hygiene sand, the first definite marker expected

Baca County

The A. R. Jones Oil & Operating Co.'s No. 1 Boice Cattle, NW NE Section 22-34-42, Miles Camp structure, is drilling below 2,000 feet. It is expected that this test will go to 8,000 feet, if necessary. It spudded in a 28-inch hole.

Larimer County

The Continental Oil Co.'s No. 3 Scott, SW SE Section 6-9n-68, Wellington Dome, a producer in the Muddy sand which is being deepened from 4,345 feet, is bottomed at 4,566 feet and working with pipe. It had 4,400 feet of water in sand at 4,536 feet, and is now bottomed in hard red rock and trying to make a water shutoff. The same company's No. 1 Hoffman, SW NE Section 23-4n-70, Deininger Dome, is bottomed at 160 feet and fishing for bit.

Jackson County

The Producers & Refiners Corp.'s No. 1 Hendershot, NW SE NE Section 2-6n-81, Pole Mountain, was drilled to 4,258 feet and is plugging to abandon. It has plugged back to 3,900 feet and is ripping the 8¼-inch. The Midwest Refining Co.'s No. 21-X Rich, SW NW Section 9-6n-80, Buffalo Creek, is drilling at 4,445 feet in gray shale.

Routt County

The Texas Production Co's No. 7 Quaintance-Hocking, NE SE Section 18-6n-86 Tow Creek, is shut down at 3,250 feet for boiler repairs.

Moffat County

The Mountain Fuel Supply Co.'s No. 2 State, 2,990 feet from south line and 660 feet from east line, Tract 37-12n-100, Hiawatha Dome, has rig up. Same company's No. 1 Musser, C NE Section 5-11n-97, Powder Wash, is drilling at 1,250 feet, and its No. 1 Lasher, NE NE Section 25-12-101, Bartram Dome, is cleaning out at 1,900 feet after plugging back to 2,110 feet. The Texas Production Co.'s No. 1 Berlin, SW NE Section 19-12-100, Bartram Dome, plugged back from 2,654 feet to 2,055 feet and is waiting for cement to set. Sand at 2,002-55 feet gauged 23,000,000 feet of gas when drilled through. Upper gas sands were cased off.

The Texas Production Co.'s No. 12 Knowlton, SW SE Section 33-5n-91, Moffat Dome, is bottomed 4,509 feet in shale and will run casing before drilling into the Sundance. Keoughan and Myers' No. 1 State, SW SW Section 16-4n-101, Midland Ridge, is drilling below 1,520 feet in a hard formation. The Midwest Refining Co.'s No. 24 Hannewalt, SE SE Section 4-6n-92, Bell Rock, is bottomed at 2,908 feet and drilling up shoe joint.

Rio Blanco County

The Magnolia Petroleum Co's No. 1-A Fordham, NW cor. SW Section 9-2s-96, Piceane Creek Dome, a test of the Green River shale of Tertiary age, was drilled to 5,130 feet and is shut down. It will be plugged back to the gas sand at 2,810 feet and completed as a gas well. While several sands were cut in the lower depth, nothing of importance was encountered. The gas was found in several upper horizons. Negotiations are pending with the Southern Union Gas Co. for the piping of gas from Piceane Creek to Rifle, Newcastle and other towns. The Tide Water-Associated Oil Co.'s No. 1 Amazon (Gray permit), SE cor. Section 24-2n-103, which was drilled to 4,800 feet in 1927, when the hole was lost, is preparing to abandon. Several horizons where oil and gas shows were encountered will be tested before cementing them off. While this well went to the Sundance, it was not considered a satisfactory test and it is probable that another will be drilled.

Garfield County

The Fulton Petroleum Co.'s No. 1 Smith, NE NW Section 8-8s-102, Garmesa Dome, is drilling at 300 feet with the 15½-inch at 97 feet.

Mesa County

The Argo Oil Co.'s No. 1 Hoel, NE cor. Section 23-8s-104, High Line Dome, is bottomed at 2,765 feet and pulling the 6¼-inch. This operation has been delayed for several months with a fishing job

Dolores County

The Transcontinental Oil Co.'s No. 1 Glade, C NW Section 30-41-16, is drilling at 6,720 feet and probably is below the Pennsylvanian.

Montezuma County

The Mesa Verde Ranch Co.'s No. 2 Haller, SW NW SE Section 33-36n-14w, Mount Lookout Dome, is drilling at 450 feet in a test to the Sundance. Surface water was cased off at 250 feet. The location is three-fourths of a mile southeast of No. 1 Haller, a well drilled for watet which encountered gas in the Dakota at 740 feet.

Boulder County

The Reliance Oil Co.'s No. 1 Erickson, SW NE NW Section 33-2n-70, in the center of the old Boulder Field, was plugged and abandoned at 3,150 feet. It tested the Muddy and Dakota and had water at 2,880-2,900 and 3,070-80 feet. Same company is drilling at 700 feet in

(Continued on Page 109)

IMPERIAL STARTS TWO MORE TESTS IN DEVELOPMENT OF TURNER VALLEY

By Victor Lauriston
Staff Correspondent, Canadian Fields

CHATHAM, Ontario, Aug. 4.—In the Turner Valley Field, Imperial Oil, Ltd., continuing its development program has spudded in two new tests. In the southern part of the Central Turner Valley area, Royalite Oil Co.'s No. 25, Section 31-19-2w5, is reported to have cemented surface casing at 266 feet. The other new test is Lowery Petroleum's No. 2 in Section 17-19-3w5, in South Turner Valley, not far from Lowery's No. 1 producer, which is down 31 feet.

In Central Turner Valley, Dalhousie Oil Co.'s No. 7, LSD 11, Section 18-20-2w5, is drilling 206 feet in the lime at 5,206 feet depth. Dalhousie's No. 1, LSD 4, has come back into production after being frozen off. Royalite Oil Co.'s No. 18 is cleaning out at 3,887 feet.

In South Turner Valley, Advance Oil Co.'s No. 5-A, LSD 16, Section 19-19-2w5, some 483 feet in the lime at 6,515 feet, is reported to have increased its wet gas flow to 9,000,000 feet a day following a shot, and will be put on the separator.

In Section 17-19-2w5, Mayland Oil Co.'s No. 2, LSD 8, which entered the lime at 4,710 feet, is drilling at 4,790 feet, and will shortly change to diamond drill outfit. Mayland's No. 3 is drilling at 4,735 feet.

Southern Lowery's No. 1, LSD 3, Section 9-19-2w5, is drilling at 3,924 feet. Royalite Oil Co.'s No. 4, LSD 3, Section 29-19-2w5, is drilling at 4,260 feet.

In Section 20-19-2w5, Northwest-Associated's No. 2, LSD 6, is drilling 60 feet in the lime at 5,016 feet. Home Oil Co.'s No. 5, LSD 7, is drilling 304 feet in the lime at 4,784 feet. This test, which is somewhat south of the earlier Home producers, is below the depth in the lime at which it got big production. Home's No. 6 is at 3,617 feet and drilling, and Home's No. 7 is drilling at 1,734 feet.

Production of the four Home Oil Co. wells has been curtailed again by freezing in the lime. It was recently reported that Nos. 3 and 4 were frozen off and Nos. 1 and 2 producing.

South Turner Valley

In the South Turner Valley, Wellington Oils' No. 1, LSD 1, Section 20-19-2w5, has installed a second separator and somewhat increased crude naphtha recovery. Freehold Oils' No. 2, LSD 8, same section, unofficially reported making less than 100 bbls. from the lime at 4,308 feet, will be deepened to increase production.

In Section 20-19-2w5, Calmont Oils' No. 7, LSD 11, is drilling 83 feet in the lime at 5,096 feet depth. Calmont's No. 4 is drilling just above the lime at 4,758 feet. In LSD 5, Alberta Pacific's No. 1 at 5,689 feet and No. 2 at 5,837 feet are testing production from the lime and look like small wells.

In Section 9-19-2w5, Commonwealth Petroleums, Ltd., is making preparations for a test, which will be drilled if Southern Lowery's No. 1 in LSD 3, same section, gets the lime around 4,000 feet. The Southern Lowery well is just east of the Commonwealth acreage. Commonwealth's

(Continued on Page 134)

Timken Bearings *in the* Emsco Electric Drilling *and* Pumping Unit

No division of all industry has shown a more progressive spirit in the application of Timken Bearing benefits to their products than that displayed by the manufacturers of oil field machinery.

Perhaps the demands of the oil fields have been more urgent and exacting than in most industries, but, whatever the cause, the results are all in favor of the operators of Timken-equipped machinery.

This forward-looking attitude is well-expressed by the keenly appreciative use that has been made of Timken Bearings at the vital points of the Emsco Electric Drilling & Pumping Unit built by The Emsco Derrick & Equipment Company, Los Angeles, California.

There are 4 Timkens in the jack posts of this equipment and 2 in the gear reduction unit. In these positions radial, thrust and combined loads, shock and torque are severe, but the exclusive combination of Timken tapered construction, Timken positively aligned rolls and Timken-made steel is more than a match for them.

Other valuable advantages are freedom from lubrication worries, saving of lubricant, and radical reduction of maintenance expense.

The Timken Roller Bearing Company, Canton, Ohio

TIMKEN *Tapered Roller* **BEARINGS**

California Outlook More Reassuring

Production Will Be Held Around 600,000 Bbls. Daily. Playa Del Rey an Important Factor in Future Trend

By L. P. Stockman
Staff Correspondent, California Fields

LOS ANGELES, Calif., Aug. 2.—Although it is practically impossible to predict the trend of production for more than six months in advance with any degree of accuracy, the situation in California is expected to hold relatively stable during the next several months. No substantial increase is anticipated nor is state production of crude oil, on the other hand, expected to register any appreciable drop. It is quite possible that due to development work in the Playa Del Rey Field of Los Angeles basin state production may show a minor upswing later in the year. From a broad aspect, however, it is thought that crude oil production in California will continue within striking distance of 600,000 bbls. per day, with the average daily production somewhat above this mark rather than below.

Playa Del Rey holds the key to the production trend during the next several months as there are no other fields in the ascendancy at the present time. Long Beach will probably continue to be an important factor for the balance of the current year, although developments indicate that this field will probably not show any substantial increase in production. Long Beach is sustaining more development work than any other single field in the State at the present time, but notwithstanding that there are 96 strings of tools in operation, it appears quite probable that daily production of this field at the end of the year will be somewhat lower than at present. Santa Fe Springs will probably also be considerably lower provided, however, the operators do not open curtailed production too rapidly.

Consider Deep Drilling

With drilling operations declining throughout the State, due to the absence of new undeveloped fields, operators are once again centering their attention on the possibility of deep drilling in proven fields. Several tests have already been started but this work is not general by any means as the larger companies are refraining from deep zone exploration and exploitation in order to hold back production until conditions improve. As a matter of fact, the Standard, Union, Shell, General Petroleum, Associated and The Texas Company have undeveloped proven deep zones in the Coyote, Dominguez, Brea Olinda and Inglewood Fields which can be drilled whenever occasion demands. These companies, however, recognize the advantage of retarding development work until a more propitious time and hence will not drill these fields until a later date.

Santa Fe Springs, however, appears destined to enter the production picture again along around the end of this year if present plans are carried out. The George F. Getty Co. is apparently going to attempt to develop deep production in a new zone lower than those discovered in this field up to the present time, although officials disclaim any thought of engaging in exploration work at the present time. The fact remains, however, in spite of this declaration that the George F. Getty Co. spudded in No. 50 Hill at Santa Fe Springs this week in the face of adverse conditions from a production standpoint as new wells finished in this field six months from today cannot be expected to register flush production from present producing zones. It should, under normal conditions, require about six months' drilling time to carry a well down to around 9,000 feet from spud to completion so that the presence or absence of a new deep zone at Santa Fe Springs should be known around the end of this year.

While commenting on this new projected deep test, it might not be amiss to call attention to the fact that there is an excellent possibility of developing production below the present Clarke and Hathaway zones in spite of three wells already carried down to around the 9,000-foot level. None of this trio of deep tests can be classified as conclusive evidence of the absence of deeper production for the simple reason that they were located at some distance from the apex of the structure. Getty's No. 50 Hill, however, is much more favorably located and should therefore be of more value from an exploration standpoint. The first deep test drilled at Santa Fe Springs following the cessation of deep flush production was Oscar Howard's No. 7 Hathaway, which proved a dud at 9,356 feet. This well, however, showed some favorable indications which tend to indicate that better success might be anticipated higher up on the structure. The Wilshire Oil Co. and The Texas Company also drilled deep tests in this field but these projects were likewise unsuccessful because of unfavorable structural locations complicated with mechanical difficulties. The former's No. 4-A Baker was stopped at 8,803 feet, while the latter's No. 10-A Patterson was bottomed at 9,058 feet.

Favorable Geology

From a geological standpoint, conditions at Santa Fe Springs are favorable for deep zone exploration and it would not be at all surprising if another productive horizon or two was ultimately discovered. Based on development work undertaken in this field up to the present time and similar drilling at Long Beach, Santa Fe Springs will not be permanently removed from the production picture until the 10,000-foot level has been reached as correlation work indicates the probable existence of productive reservoir rocks down to approximately this depth. Only the future can tell what effect deep drilling will exert in this area both as to development work and the amount of production secured. It is quitely likely, however, that even if a new deep zone is discovered it will not cause any very great problem from a production standpoint. These deep holes would require an extended drilling period and present more than the usual amount of hazards encountered in deep drilling. This would prevent any new deep zone from reaching a high maximum flush production as completions would be spread out over a longer period of time. Any peak reached heretofore resulting from deeper drilling would be flatter than usual. The present large number of producing wells at Santa Fe Springs should also prevent promiscuous drilling as many of the town lots already sustained two wells and thus render it almost impossible to locate an additional hole.

It is quite likely that operators may petition the George F. Getty Co. to retard deep drilling until a later date if subsequent developments indicate that No. 50 Hill, the new hole, is to be carried on down in search of a new horizon. If this action is taken, it is quite probable that drilling operations will be held back as it will be recalled that in a similar instance several years ago the Getty interests acquiesced to the desire of operators and did suspend drilling. The St. Helens Petroleum is the latest concern to enter the deep zone exploration campaign getting under way. This company has selected one of its producing wells in the Montebello Field of Los Angeles basin as a logical deep test and work has already got under way. The outcome of this deep test will be watched with considerable interest because of the prevailing opinion that the Montebello Field should have a deeper zone. Several deep wells have already been drilled in this field at various intervals in the past but none of them were deep enough or favorably located with respect to structure to preclude the subsequent discovery of new lower zones. The only disconcerting feature in connection with the deep test undertaken by the St. Helens Petroleum is the possibility that if substantial production is secured it may precipitate a general drilling campaign throughout the field. A large part of the productive acreage at Montebello is held by major companies but this factor does not necessarily preclude the development of substantial production as lease obligations would force operators to drill irrespective of their desires in the matter.

Two deep tests drilled by the Superior

TANKER SHIPMENTS FROM LOS ANGELES TO ATLANTIC AND GULF COAST PORTS

Commodity—	Total This week	Daily average	Total last week	Daily average	This week to date	Same time last year
Crude oil	.....	.....	.....	.....	68,690	722,232
Fuel oil	.....	.....	.....	.....	71,950	49,950
Diesel and gas oil	141,873	20,268	168,133	24,019	2,294,195	913,200
Gasoline	384,679	54,954	577,375	82,482	11,366,996	11,661,112
Naphtha distillate	.....	.....	.....	.....	.....	81,750
Coastwise—						
Crude oil	83,000	11,857	292,076	41,725	8,652,554	13,586,298
Fuel oil	373,022	53,289	301,243	43,035	9,846,113	12,071,298
Diesel and gas oil	22,197	3,171	7,864	1,123	1,070,750	758,492
Gasoline	397,997	56,857	158,615	22,659	7,087,216	6,241,709
Kerosene	12,081	1,726	.....	.....	114,685	37,157
Exports						
Crude oil	219,141	31,306	49,206	7,029	3,900,450	3,176,408
Fuel oil	192,965	27,566	357,023	51,003	10,635,914	10,890,520
Diesel and gas oil	105,895	15,128	137,302	19,615	2,723,436	1,465,159
Gasoline	325,467	46,495	397,664	56,809	9,384,357	6,074,121
Kerosene	59,639	8,520	.....	.....	2,172,279	1,773,006
Lubricants	.....	.....	.....	.....	10,082	.....

TANKER SHIPMENTS FROM SAN FRANCISCO TO ATLANTIC AND GULF PORTS

Diesel and gas oil	91,688	13,098	47,680	6,811	227,648	.....
Gasoline	.....	.....	77,312	11,045	783,367	1,264,942
Lubricants	.....	.....	.....	.....	16,776	69,172
Coastwise—						
Fuel oil	64,405	9,201	124,260	17,751	2,121,042	1,602,343
Diesel and gas oil	.....	.....	8,751	1,250	169,165	326,235
Gasoline	122,714	17,531	79,850	11,407	2,366,219	2,886,352
Kerosene	.....	.....	5,151	734	142,044	85,406
Exports—						
Crude oil	.....	.....	.....	.....	3,075	121,603
Fuel oil	133,025	19,004	48,110	6,873	662,135	464,461
Diesel and gas oil	.....	.....	1,550	221	239,054	155,474
Gasoline	144,035	20,584	34,780	4,969	2,433,049	3,172,819
Kerosene	28,120	4,017	.....	.....	408,203	382,417
Lubricants	.....	.....	.....	.....	18,672	21,899

LANDOWNERS REAP HARVEST FROM EXPLORATION BY OIL COMPANIES

The astonishing extent to which owners of real estate in California have prospered as a result of the never ending search for oil was recently brought to public attention by the report that one family at Huntington Beach, living on a piece of land which never has developed commercial production, has received $50,000 in rentals and bonuses from oil companies within the past 10 years.

The department of public information of the California Oil & Gas Association has taken the trouble to make a study of this phase of real estate activity, and Edwin Higgins, managing director of the association, expresses the belief that during a normal year the oil industry in this State will pay out as much as $20,000,000 in bonuses and rentals for land upon which to conduct its explorations.

A country club not far from Los Angeles was paid roundly $200,000 in bonuses, within two years, for drilling privileges, and not a barrel of oil was found. A home building concern having thousands of stockholders in southern California, was paid approximately $2,000,000 in bonuses for the right to drill a large block of idle land in the Inglewood district.

In the vicinity of Bell, hundreds of thousands of dollars have been paid to land owners for leases within the past eight years, and although upward of a dozen wells have been drilled in that vicinity not a barrel of oil has been produced.

Farther north, in Kern County, millions of dollars have been paid to property owners for drilling privileges, in addition to the royalties paid when oil has been found. One estate in that county, holding acreage which originally cost from 85 cents to a $1 an acre, has been sold outright for $850 to $1,000 an acre, for oil exploration. There are thousands of acres of grazing lands in the San Joaquin Valley, which as such were rated as being worth $50 an acre, but which brought from $1,500 to $5,000 an acre after oil was discovered nearby.

It is interesting to note that while thousands of acres are leased year after year by the different oil companies, the property owners have nothing to do but collect the rents until oil is found—then the property enhances greatly in value. Another thing which is decidedly to the landowner's advantage is the fact that he does not have to spend his own money for scientific studies to determine whether or not his property is worth drilling. The oil companies, with their large staffs of geologists, do all the research work, and bear the heavy financial burden of trying to prove their conclusions with the drill.

Mr. Higgins believes that more than $80,000,000 in rentals and bonuses have been paid to California landowners within the past 10 to 15 years. Since the ratio of successful wildcat wells is said to be 1 out of every 100, it is easy to see that the oil operator is taking the long chance, while the landowner cannot lose, for there is practically no limit to the number of successive leases that he may execute.

In the 10 years from 1920 to 1929, California's total oil production was over 2,000,000,000 bbls. The landowners' royalties from that production totaled approximately $340,000,000. This great sum of money has been an important factor in the prosperity of the State.

Oil Co. and the United Kern Petroleum Co. in the Torrance Field during the past 90 days were unsuccessful due to geological limitations but similar work under way at Huntington Beach is still in the prospecting stage. There are several deep tests under way in the Huntington Beach Field at present and the Superior is making preparations to start work on another. Opinion among geologists and petroleum engineers is divided as to the possibility of opening up new deep productive horizons in the Huntington Beach Field and for this reason the future of this field can only be determined on the results of work. Huntington Beach presents a very complex problem due to faulting and cross faulting with the result that a deep test in one section of the field does not necessarily govern conditions in other untested parts. The deep exploration work under way at Santa Fe Springs, Montebello, Huntington Beach, Inglewood and other fields throughout the State will probably lead to additional similar work a little later on. The Standard, which controls the entire productive acreage in the West Coyote Field, recently proved up an additional deep zone for a future reserve and it is quite probable that sooner or later deep drilling will be undertaken by other companies at Richfield, West Coyote and other fields susceptible to lower zone development.

Playa Del Rey

Two more wells were successfully finished in the Playa Del Rey Field of Los Angeles Basin during the past week and a check indicates the probable completion of several more in the near future. The Barnsdall and Cypress Petroleum, jointly developing the Burke lease, started off the week by bringing in well No. 1 flowing 2,280 bbls. of 23.5 gravity oil per day from 6,266 feet. This new well, which picked up the conglomerate at 6,194 feet and topped the schist at 6,242 feet, will probably require another cement job on the 9-inch landed at 6,055 feet as current production several days after completion is cutting approximately 20 per cent. No. 3 Burke, located on the same lease, will be given a chance to make a bid for production some time during the coming week.

The Elmer Oil Co.'s No. 1 Venice, unlike No. 1 Burke of the Barnsdall, registered clean production upon completion in the deep Recreation zone during the week. This new well, which topped the conglomerate at 6,201 feet and encountered the schist at 6,229 feet, was good for 2,475 bbls. of clean 24.6 gravity oil per day. No. 2 Del Rey of the Ohio Oil Co. tested wet during the latter part of the week and another cement job will probably be necessary on the 8⅝-inch water string landed and cemented at 6,456 feet. This well is located in the extreme northeastern part of the field and should prove up several hundred acres of leases held by the Ohio and Union Oil companies if commercial production is developed. The Union, with one producer, No. 1 Del Rey, flowing 795 bbls. per day from the upper zone at 4,014 feet, is driving piles for a second well on this property and is rushing work ahead for three new wells to be drilled on a 50-acre lease recently acquired.

Umpire Neal Anderson and A. T. Jergins, chairman of the Playa Del Rey operators committee, are having considerable difficulty in securing ratification of the state-wide curtailment agreement which will bind this field to conform with general curtailment policies. The delay in securing signatures of operators has prevented the major companies from posting an adequate price schedule for this field as they have signified their willingness to post a price and purchase oil only when the curtailment agreement is ratified. In the meantime, the Union, Shell and Del Rey Oil & Refining Co. are purchasing the current production of some operators who have signed the curtailment agreement and are actually restricting production. Additional production is being moved out of the field for storage or sale to independent refiners by tank trucks and trailers. One of the most interesting features in connection with development work at Playa Del Rey is the unusually high gasoline content of natural gas produced. In several instances this natural gas contains in excess of four gallons of natural gasoline to each 1,000 feet of natural gas. From a crude oil production standpoint, however, Playa Del Rey does not look like a field of major importance. New wells are registering an abnormal decline and developments indicate that many wells will not secure sufficient production to liquidate drilling costs.

Long Beach

In the Long Beach Field the Ring Petroleum recompleted No. 5-A Fee early this week flowing 810 bbls. of 29.6 gravity oil per day from 7,100 feet, the water shut-off being effected by a string of 4¾-inch landed at 6,676 feet. The Dabney-Johnston Oil Corp. successfully finished No. 24 Signal at 6,129 feet but failed to secure a natural flow. This new well was consequently placed on the beam and is at the present time pumping 198 bbls. of 23.5 gravity oil daily. A check of development work under way indicates the probability that several substantial producers may be finished in this field shortly. Quite a large number of new wells are getting under way, included in which are No. 5 Signal of the Bowles Oil Co., No. 15 Signal of the Combs Oil Co., Golden Gate Oil Co.'s No. 2 Signal, McKeon Oil Co.'s Nos. 8 and 9 Signal, Paramount Oil Co.'s No. 1 Long Beach, Petroleum Securities' No. 1 Kale, Robal Petroleum Corp.'s No. 1 Long Beach, No. 12 Jones of the Shell,

(Continued on Page 133)

INTEREST NOW TURNS TO WILDCAT OPERATIONS IN MUSKEGON COUNTY

By Paul A. Elliott

MUSKEGON, Mich., Aug. 4.—Large and small operators again are turning their attention to wildcatting in various sections of Muskegon County. The Reed Oil Co. has started drilling on its No. 1 H. Mann, NE NE, Section 29-11n-17w, Fruitland Township, about 5 miles northwest of the nearest producer in the proven field. The drillers are experiencing difficulty with the drive pipe because of quicksand.

The Jersey Oil Co. has started operations on the property of the Muskegon Brewing Co., in Section 17-10n-17w, Laketon Township, near the Muskegon Dunes State Park, about half a mile southwest of a dry hole to the Dundee, drilled by the Johnson Oil Refining Co.

More than 3,000 acres in Fruitport and Norton Townships has been leased by the Empire Oil & Refining Co., of Bartlesville, Okla., one of the largest operators now represented in the State of Michigan.

The company established an office here last fall and began to acquire leases about 10 miles south and southeast of the proven Muskegon Field. To date it has filed with the county register of deeds leases on about 70 tracts of acreage owned by as many different individuals, couples or groups of individuals between the east end of Mona Lake, the east side of Little Black Lake and the north side of Spring Lake, at Fruitport. Whether the company will drill its own wildcat well or wells on the block is not known.

Fifth Well Planned

The White River Oil Corp., of Montague, is understood to be planning to drill a fifth well on a location about half a mile from three other wildcats west of the village which were unsuccessful. Another proposed wildcat is in Section 6, Holton Township, by R. S. Jennings, of Chicago.

Completion of one small oil well and another dry gasser in the proven Mount Pleasant Field and in Broomfield Township, 14 miles west of the field, respectively, were developments of a quiet week in Michigan.

The Dixie Oil Co.'s No. 5 N. Davis, NE SE SW, Section 2-14n-3w, Chippewa Township, is the new producer in the Mount Pleasant Field. It made 50 bbls.

(Continued on Page 133)

IMPORTANT SOUTHERN CALIFORNIA WILDCATS

Company, well and location—	S.T.R.	Depth	Status
Union, No. 1 Orchard Dale, Los Angeles Co.	10- 3-11	3,490	sd. sh. drilling
Olympic Realty Corp., No. 1 Venice, Los Angeles Co.	14- 2-15	rig	rigging up
Burlingham Pet., No. 1 Compton, Los Angeles Co.	17- 3-13	4,480	sd. sh. drilling
Francis, Don, No. 1 Compton, Los Angeles Co.	8- 3-13	572	cleaning out
Ohio, No. 1 Moneta, Los Angeles Co.	35- 3-14	7,015	hd. sd. drilling
Guajome Oil Co., No. 1 El Nido, Los Angeles Co.	33- 3-14	rig	suspended
Cal. Ventura Oil Co., No. 1 Manhattan, Los Angeles Co.	30- 3-14	6,525	suspended
Cal. Ventura Oil Co., No. 1 Hermosa, Los Angeles Co.	31- 3-14	3,388	suspended
McMahon & McDonald, No. 1 Watts, Los Angeles Co.	12- 3-14	4,665	suspended
Tri-State Oil Co., No. 1 Watts, Los Angeles Co.	12- 3-14	3,618	sd. sh. drilling
Rio Grande Oil Co., No. 1 Watson, Los Angeles Co.	17- 4-13	5,994	gr. sd. drilling
Shell, No. 1 Van Nuys, Los Angeles Co.	19- 2-15	3,850	sd. sh. drilling
Anchor Oil Co., No. 1 Puente, Los Angeles Co.	19- 2-10	4,820	suspended
Rio Hondo Pet., No. 1 Puente, Los Angeles Co.	14- 2-10	2,490	oil sand
Rucker, R. C., No. 1 Puente, Los Angeles Co.	27- 2-10	3,660	suspended
Bardeen Pet., No. 1 Puente, Los Angeles Co.	9- 2-10	2,748	hd. sd. drilling
Sherman, J. W., No. 1 Puente, Los Angeles Co.	33- 2- 8	850	suspended
Keck & Hall, No. 1 Puente, Los Angeles Co.	32- 2- 8	1,120	gas, shut in
Marcel Pet. Co., No. 1 Puente, Los Angeles Co.	31- 2- 8	2,548	cleaning out
Los Gatos Oil Co., No. 1 El Monte, Los Angeles Co.	16- 1-11	1,950	rebuild rig
Olympic Corp., No. 1 Calabasas, Los Angeles Co.	18- 1-17	5,650	gr. sd. drilling
Union, No. 1 Coyote, Sansinena, Los Angeles Co.	30- 2-10	4,310	br. sh. drilling
Tureco Oil Co., No. 1 Whittier, Los Angeles Co.	29- 2-11	5,540	sd. sh. drilling
Western Gulf, No. 1 Brea Canyon, Los Angeles Co.	28- 2- 9	6,300	hd. sd. drilling
Lamona Oil Co., No. 1 Pomona, Los Angeles Co.	34- 1- 9	810	hd. sd. drilling
Graham & Loftus, No. 1 Coyote, Orange Co.	18- 3- 9	5,680	sd. sh. drilling
Mesa Pet., No. 1 Newport, Orange Co.	21- 6-10	4,910	suspended
Hall, H. L., No. 1 Newport, Orange Co.	20- 6-10	790	suspended
Standard, No. 1 Newport, Orange Co.	26- 6-10	1,550	sd. sh. drilling
Fidelity Pet. Co., No. 1-A Murrietta, Riverside Co.	23- 7- 3	701	cleaning out
Hemet Pet. Co., No. 1 Ward, Riverside Co.	9- 5- 1	3,560	suspended
Imperial Valley Oil Co., No. 1 Brawley, Imperial Co.	32-11-10	3,000	hd. sd. drilling
McGregor Synd., No. 1 Del Mar, San Diego Co.	17-14- 3	1,265	cleaning out
Borderland Oil Co., No. 1 Encinitas, San Diego Co.	12-12- 4	2,420	hd. sd. drilling
Borderland Oil Co., No. 1 Point Loma, San Diego Co.	30-16- 3	2,410	gr. sd. drilling
Carr, O. K., No. 1 Capistrano, San Diego Co.	13- 8- 8	4,183	resume work
Grey, H. H., No. 1 Redlands, San Bernadino Co.	25- 1- 2	2,525	fishing
Girard & Grimes, No. 1 Corona, San Bernardino Co.	8- 2- 8	1,549	cleaning out
Western Gulf, No. 1 Santa Ana, Orange Co.	12- 3- 8	....	grading

IMPORTANT NORTHERN CALIFORNIA WILDCATS

Company, well and location—	S.T.R.	Depth	Status
Standard, No. 1 Point Conception, Santa Barbara Co.	X- 5-34	5,140	hd. sd. drilling
Universal Consd., No. 1 Pt. Conception, Santa Barbara Co.	30- 5-34	4,000	redrilling
Prairie Oil Co., No. 1 Lompoc, Santa Barbara Co.	15- 7-35	4,361	hd. sd. drilling
Fields Gasoline Co., No. 1 Santa Maria, Santa Barbara	8- 9-33	3,720	br. sh. drilling
Barnsdall, No. 1 Gato Ridge, Santa Barbara Co.	9- 8-32	2,412	sd. sh. drilling
Deuel Pet. Co., No. 1 Santa Ynez, Santa Barbara Co.	9- 7-30	3,130	suspended
Carey, A., No. 1 Goleta, Santa Barbara Co.	1- 4-28	2,880	suspended
General Pet., No. 1 Goleta, Santa Barbara Co.	21- 4-28	4,533	shut in
General Pet., No. 2 Goleta, Santa Barbara Co.	21- 4-28	4,350	suspended
General Pet., No. 3 Goleta, Santa Barbara Co.	21- 4-28	mtl.	building rig
General Pet., No. 134 Goleta, Santa Barbara Co.	21- 4-28	1,485	suspended
General Pet., No. 136 Goleta, Santa Barbara Co.	21- 4-28	1,016	suspended
General Pet., No. 137 Goleta, Santa Barbara Co.	21- 4-28	1,026	suspended
General Pet., No. 138 Goleta, Santa Barbara Co.	21- 4-28	4,931	suspended
General Pet., No. 139 Goleta, Santa Barbara Co.	21- 4-28	1,035	suspended
General Pet., No. 143 Goleta, Santa Barbara Co.	21- 4-28	1,040	suspended
Boles Oil Co., No. 140 Goleta, Santa Barbara Co.	22- 4-28	1,040	suspended
Ring Oil Co., No. 1 Goleta, Santa Barbara Co.	16- 4-28	5,205	sd. sh. drilling
U. S. Pet., No. 141 Goleta, Santa Barbara Co.	20- 4-28	1,035	suspended
U. S. Pet., No. 142 Goleta, Santa Barbara Co.	20- 4-28	1,032	suspended
U. S. Pet., No. 143 Goleta, Santa Barbara Co.	20- 4-28	1,019	suspended
El Camino, No. 149 Goleta Tideland, Santa Barbara Co.	22- 4-28	1,035	suspended
Bolsa Chica, No. 191 Goleta, Santa Barbara Co.	24- 4-29	910	sd. sh. drilling
Caldwell Brown, No. 159 Goleta, Santa Barbara Co.	24- 4-29	1,040	suspended
Cochran, J. H., No. 1 Naples, Santa Barbara Co.	7- 4-29	1,010	sd. sh. drilling
Wildcat Oil Co., No. 1 Santa Maria, Santa Barbara Co.	20-10-35	4,850	sd. sh. drilling
Pacific Western, No. 1 Gibraltar, Santa Barbara Co.	14- 5-27	2,345	suspended
Shell, No. 1 Summerland, Santa Barbara Co.	18- 4-25	4,288	sd. sh. drilling
Standard No. 2 Casitas, Santa Barbara Co.	26- 4-25	1,200	reaming
Continental, Tideland permit No. 121, Santa Barbara Co.	33- 4-25	1,085	suspended
Continental, Tideland permit No. 122, Santa Barbara Co.	33- 4-25	1,020	suspended
Continental, Tideland permit No. 123, Santa Barbara Co.	33- 4-25	1,020	suspended
Continental, Tideland permit No. 124-A, Santa Barbara	33- 4-25	418	suspended
Continental, Tideland permit No. 125, Santa Barbara Co.	33- 4-25	1,455	suspended
Continental, Tideland permit No. 126, Santa Barbara Co.	33- 4-25	1,034	suspended
Continental, Tideland permit No. 127, Santa Barbara Co.	33- 4-25	1,055	suspended
Continental, Tideland permit No. 128, Santa Barbara Co.	33- 4-25	1,054	suspended
Continental, Tideland permit No. 129, Santa Barbara Co.	33- 4-25	1,020	suspended
Exeter Oil Co., Tideland permit No. 163, Santa Barbara	32- 4-25	76	suspended
Getty, Geo. F., No. 120 Carpinteria, Santa Barbara Co.	32- 4-25	1,024	suspended
Getty, Geo. F., No. 130 Carpinteria, Santa Barbara Co.	32- 4-25	1,029	suspended
Shell, No. 5 Oxnard, Ventura Co.	14- 2-20	2,509	sd. sh. drilling
Prairie Oil & Gas Co., No. 1 Ventura, Ventura Co.	30- 3-22	6,584	sd. sh. drilling
Bolsa Chica, No. 1-A Temescal, Ventura Co.	4- 4-18	2,450	oil sand
Fennell, E. A., No. 1 Lankershim, Ventura Co.	13- 4-19	1,791	suspended
General Pet., No. 1 Fillmore, Ventura Co.	6- 3-19	2,885	sd. sh. drilling
Associated, No. 1 Rincon Creek, Ventura Co.	19- 4-24	2,090	fishing
Pure Oil Co., No. 1 S. P. Canyon, Ventura Co.	15- 4-21	1,095	sd. sh. drilling
Superior Oil Co., No. 1 Sespe, Ventura Co.	14- 4-21	....	grading
Nordon Oil Co., No. 1-A Buttonwillow, Kern Co.	7-29-24	3,468	sd. sh. drilling
Shell, No. 1 Lerdo, Kern Co.	23-28-26	4,628	abandoned
Shell, No. 1 Weed Patch, Kern Co.	29-30-29	5,050	deepening
Pet. Sec., No. 1 Edison, Kern Co.	14-29-29	1,240	hd. sd. drilling
Symark Oil Co., No. 1 Edison, Kern Co.	24-29-29	2,130	suspended
Sayre, F. M., No. 1 Edison, Kern Co.	5-30-29	4,220	cleaning out
Elmer Oil Co., No. 1 Tejon, Kern Co.	15-30-30	4,714	hd. sd. drilling
Hancock Oil Co., No. 1 Jasmine, Kern Co.	23-25-27	2,665	suspended
Shell, No. 1 Semitropic, Kern Co.	17-27-23	4,249	redrilling
Moran & DeCamp, No. 1 Mojave, Kern Co.	26-10-14	505	hd. sd. drilling
Bardeen, H. A., No. 1 San Emidio, Kern Co.	18-10-23	1,190	br. sh. drilling
Bardeen, H. A., No. 2 San Emidio, Kern Co.	10-10-23	3,191	sd. sh. drilling
Stabler, W. W., No. 1 Commanche Pt., Kern Co.	4-11-18	2,040	sd. sh. drilling
Ritchie, J. J., No. 1 Tejon, Kern Co.	33-11-19	830	sd. sh. drilling
Wrenn, J., No. 1 Antelope Plains, Kern Co.	32-25-17	800	sd. sh. drilling
Hannon, Tom, No. 1 Devils Den, Kern Co.	25-25-18	2,619	suspended
Richfield, No. 1 Kreyenhagen, Fresno Co.	33-22-16	2,560	hd. sd. drilling
Ohio Oil Co., No. 1 Coalinga, Fresno Co.	8-21-15	859	cemented
Petroleum Securities, No. 2 Huron, Fresno Co.	28-20-16	7,390	suspended
Panorama Oil Co., Well No. 1, San Luis Obispo Co.	7-31-21	4,019	suspended
Libby Pet., No. 1 Shandon, San Luis Obispo Co.	21-27-15	4,485	gr. sd. drilling
Paso Robles Synd., No. 1 Creston, San Luis Obispo Co.	27-27-11	3,941	cleaning out
Union, No. 1 King City, Monterey Co.	8-22- 8	3,250	suspended
Standard No. 1 King City, Monterey Co.	23-22- 7	4,740	hd. sd. drilling
O'Donnell, J. E., No. 1 Dudley Ridge, Kings Co.	7-23-20	4,310	suspended
Penn Western, No. 1 Tulare Lake, Kings Co.	24-21-18	1,338	suspended
Wellport Oil Co., No. 1 Devils Den, Kings Co.	9-24-17	3,940	suspended
Twin States Oil Co., No. 1 Point Arena, Mendocino Co.	14-12-17	4,004	hd. sd. drilling
Oakdale Oil Co., No. 1 Oakdale, San Joaquin Co.	3- 2-10	3,535	suspended
Orinda Pet., Well No. 1 Contra Costa Co.	32- 1- 3	600	sd. sh. drilling
White, Roy, No. 1 Pixley, Tulare Co.	8-23-26	4,022	suspended
Terra Bella Oil Co., No. 1 Porterville, Tulare Co.	35-22-27	918	recemented
Western Oil Co., No. 1 Porterville, Tulare Co.	35-22-27	912	oil sand
Consolidated Properties, Ltd., No. 1 Porterville, Tulare	35-22-27	630	sd. sh. drilling
Terra Bella Drlg. Co., No. 1 Porterville, Tulare Co.	34-22-27	625	sd. sh. drilling
Payatt Oil Co., No. 1 Porterville, Tulare Co.	34-22-27	mtl.	building rig
Colusa Oil Co., No. 1 Bush, Colusa Co.	31-15- 4	670	hd. sd. drilling
Turner Oil Co., No. 1 Porterville, Tulare Co.	34-22-27	mtl.	building rig

Heat Checks Activity in Central West

Lima Field in Northwestern Ohio Has a Few Completions, but They Are Counterbalanced by Old Wells Pulled Out and Abandoned

By George A. Whitney
Staff Correspondent, Central West Fields

FINDLAY, Ohio, Aug. 4.—Hot weather that played around 98 to 104 degrees, brought about less activity in most of the divisions of the Central West Field, with lack of rain, making water scarce over the fields.

In the old Lima Field of northwestern Ohio, a few completions were made, but more old wells were pulled out and abandoned than were drilled in. The greatest activity in the Lima division is centered in the Kenton Field of Hardin County to the south of Findlay. The Geiger Oil Co.'s second test, 500 feet from the south line and 650 feet from the east line of the Grant Geiger farm, SE, Section 13, Cessna Township, Hardin County and west of Kenton, pumped an initial of 30 bbls. from 1,350-73 feet, or 23 feet in the Trenton lime. No. 3, same farm, is drilling. Eagan and White's No. 1 well, in the southwest corner of the Oscar Steiner farm, NE, Section 12, same township, produced 25 bbls. initially along with gas at 50 feet in the Trenton at a total depth of 1,420 feet. Harmon & Watts of Mansfield, Ohio, are drilling a test on the Henry Ziegler farm, Section 24, Cessna Township, with five other wells under way in this township.

In Washington Township, same county, the Kemrow Co.'s test, on the W. B. Howard, Section 35, was a dry hole at a total depth of 1,474 feet after going 60 feet in the Trenton, which was topped at 1,414 feet. Traeger Oil Co. is drilling a test on the August and Anna Traeger farm, Section 7, Pleasants Township, and the Blanchard Oil & Gas Co. is drilling a test on the Phil J. Kurt farm, Section 5, Blanchard Township, same county. Coyle and Jones are drilling a test in the same vicinity on the Charles H. Bell farm, but in Tymochtee Township, Wyandot County.

Henrys Wildcat Down 1,800 Feet

At latest report the wildcat drilling by the Henrys Oil & Gas Co. on the D. J. Creager farm, Section 27, Damascus Township, Henry County, was down to 1,800 feet and had not yet reached the sand.

In Shelby County, O'Neil Brothers are drilling a test on the J. N. Perin farm, Section 34, Cynthian Township, Shelby County, and the Eilerman Oil Co. is drilling No. 1 on the J. Gustache farm, Section 23, same township.

In Wood County, Plain Township, Murray B. Chidester's No. 9, in the southwest corner of the B. P. Stratton farm, SE, Section 34, topped the Trenton at 1,230 feet and at 330 feet in, to a total depth of 1,560 feet, struck an ocean of salt water. It is a duster as far as oil is concerned. In Montgomery Township, the Sun Savings Bank Co. abandoned Nos. 3 and 4 Jacob Fautz farm, Section 18. Cleveland Fuel Oil Co. abandoned Nos. 5 and 6 on the Eliza Hoodlebrink farm, in Freedomn Township, near Pemberville. In Lake Township, Charles F. Zeising and others abandoned No. 1 Elizabeth Thone, Section 26, and in Portage Township, Hugh R. Reynolds did the same with Nos. 1 and 2 Hugh R. Reynolds farm, Section 34. In Perrysburg Township, George L. Haubert and others are starting No. 6 on the Catherine Smith farm, Section 29.

In Hancock County, Liberty Township, the Heckathorn Oil Co.'s No. 7 G. R. Stewart farm, Section 32, pumped 30 bbls. the first 24 hours, and L. Cramer's test, 200 feet from the south line and 600 feet from the west line of the L. Huntworth farm, NE, Section 31, same township, was dry at a total depth of 1,380 feet, or 63 feet in the Trenton. The Ohio Oil Co. abandoned Nos. 6, 7, 9 and 15 on the J. M. Cusac farm, Section 34.

Allen County

Northeast of Lima, in Bath Township, Allen County, Roalman & Peak are drilling No. 4 Nancy E. Leedy, Section 14, and C. A. and F. J. Peavey are drilling No. 5 C. A. Hoover farm, Section 24, same township.

Floy Fry and others' No. 3 well, 550 feet from the south line and 700 feet from the east line of the H. C. Whetstone, SE, Section 27, Logan Township, Auglaize County, pumped 7 bbls. initial at a total depth of 1,193 feet, or 28 feet in the Trenton lime.

The Recovery Oil & Gas Co. brought in a shale gas well in a test on the J. S. Burch farm, Section 27, Butler Township, Mercer County, and the gas will no doubt be used for light and heat. Margaret E. Grace is drilling a test on the Gus Clay farm, Section 16, Union Township, same county.

In Scott Township, Sandusky County, Joseph Fritz and others abandoned No. 3 Ara Ernest, Section 8; No. 9 Emma Benton, Section 17; Nos. 9 and 10 J. Bowers, same section; No. 12 Peter Bowe, Section 18, and Nos. 8 and 9 W. H. Shattenberger farm, Section 8. John M. Sherman and others abandoned Nos. 9 and 10 J. M. Sherman farm, No. 3, Section 9, and Charles W. Putman pulled out No. 1 on his own farm, Section 31, same township. In Woodville Township, Lewis Hille is drilling No. 5 Herman Linke, Section 18.

The Kansas-Ohio Oil & Gas Co. is drilling a second test on the R. E. Harrison estate, Section 1, Jackson Township, Seneca County. No. 1 was a 5-bbl. pumper at 1,330 feet.

West of Toledo, in Monclave Township, Lucas County, Dillon and Weed are drilling a test on the D. C. Taft farm, Section 29.

R. M. Bell and others abandoned Nos. 1 and 2 on the Gustoff Riedman farm, Section 16, Allen Township, Ottawa County.

CENTRAL OHIO

Six completions were reported for the past week in the Central Ohio Field, with five producers giving an initial production of 326 bbls., 5 dry holes and 6 gas wells. In new work starting there were 8 new locations and 15 wells started drilling, for a total of 23 for new work.

Ashland, Richland, Summitt, Athens, Tuscarawas and Belmont Counties failed to report any new wells brought in.

In Medina County, Ohio Fuel Gas Co. has a gas well in No. 1-5,177 J. F. Meyers, Lots 10 and 11, Brunswick Township. In Chatham Township, Curtis & Aikin's No. 1 M. V. Garva, Section 15, was dry at 352 feet. Oko Oil & Gas Co.'s No. 37 Henry Essing, Lot 13, same township, pumped 7 bbls. initial, and the same company's No. 38 Watson-Sanford, Section 10, pumped 5 bbls. from 340 feet. In Westfield Township, the Ohio Fuel Gas Co. has a gas well in No. 1-5,156 Lee Barnes, Lot 60, and No. 1-5,246 E. H. Kerr, Lot 45, is drilling.

In Lorain County, Carlisle Township, Ohio Fuel Gas Co.'s No. 1-5,175 Ira W. Ives, Lot 14, was a dry hole.

In Wayne County, Plain Township, Green and others' No. 3 Harry McAnaney, Lot 11, was dry in the second Berea sand.

In Holmes County, Monroe Township, the Lydic Oil & Gas Co. has a light gas well in No. 5 Charles Swank, Lot 10, from 760-65 ft.

In Knox County, Ohio Fuel Gas Co. has a gas well in No. 1-5,101 E. L. Staats, Lot 5, Jefferson Township. Same company drilling No. 2-5,255 Thomas E. Doup, Lots 5 and 17, Brown Township.

In Coshocton County, Franklin Township, Ohio Fuel Gas Co. reports a dry hole in No. 1-5,128 Keeneth E. McLeod, in the Third quarter section.

In Summitt County, Franklin Township, Kime and others are drilling deeper their No. 3 C. L. Wilcox, Section 26.

Licking County

In Licking County, Fallsburg Township, the Wittmer Properties, trustee's No. 5 Sam Mossholder farm, Section 13, after a shot, produced an initial of 160 bbls. from 2,965 to 3,012 feet. Wehrle Gas Co., starting a test on the Orville Hartman, Section 7, Hopewell Township. Pure Oil Co.'s No. 6 Homer C. Priest, Section 7, Hanover Township, produced an initial of 74 bbls. from 2,822-62 feet. Everette Gas Co., drilling No. 3 Dan O. Flenner, same township, and the Pure Co., starting No. 7 Homer C. Priest farm.

In Muskingum County, Washington Township, Palmer & Geisinger's tests on the Huber Slack, in the Fourth quarter section, produced an initial of 80 bbls. from the Clinton lime at a total depth of 4,066 feet. In Highland Township, Fetty & Louchery's No. 1 William M. Cowden, Section 1, is a light gas well in the Berea sand at a depth of 1,217 feet. McIntyre & Gutherie's second test on the James Ford, Section 12, Newton Township, is dry from 3,560 to 3,625 feet, total depth 3,630 feet. Hopewell Gas & Fuel Co., drilling or starting a test on the Oscar Perry, Section 6, Licking Township, same county.

In Fairfield County, Pleasants Township, the City Natural Gas Works' No. 4 Henry Hartman, Section 23, is a very fair gas well in the Clinton lime from 2,351-62 feet.

In Morgan County, Marion Township, Ohio Fuel Gas Co. has a gas well in No. 1-5,199 F. J. Strode, Section 35, in the Berea sand at 1,554 feet. In Penn Township, Williams Brothers' No. 1 L. E. Moran farm, Section 16, is a light gas well at 1,674 feet. Wallace and others report a dry hole in No. 8 on the Margaret A. Pickerell, Section 32, Malta Township, at 1,193 feet.

INDIANA

The best of the late completions in the Indiana Field is the Wiser Oil Co.'s No. 6 well, 750 feet from the north line and 200 from the west line of the William Phillips farm, NE Section 23, Logan Township, Pike County, with an initial of 40 bbls. from 1,330-57 feet. P. C. Andrews' No. 10, in the SE cor. of the A. Atkinson farm, NE Section 23, same township, developed into a 25-bbl. initial producer. This well was drilled to a total depth of 1,407 feet, but plugged back to 1,364 feet and given a 60-quart shot.

H. C. Darby is drilling No. 5 G. Stewart, Section 23. P. C. Andrews is drilling No. 11 A. Atkinson, same section, and R. J. Rendal is drilling No. 5 F. Chandler farm, Section 15, same township. In Washington Township, same county, G. H. Risher's test in the SE cor. of the Charles B. Crow, Section 25, was dry at 1,200 feet. C. E. Wommer is drilling No. 3 J. M. Thomas, Section 30, and C. C. Taliaferro, Jr., is drill-

(Continued on Page 120)

KENTUCKY OPERATORS TAKE ACTION LOOKING TO REDUCED PRODUCTION

By George A. Whitney

OWENSBORO, Ky., Aug. 2.—At a meeting of oil operators held at Owensboro it was agreed that until further notice, all wells drilling on old properties on July 21, when completed shall be connected to pipe line and oil run as usual, but in the case of wells drilling after July 21 producers will have to provide their own storage and dispose of the oil as best they can because the pipe line will not connect them until such time as there is a market for the oil. Whatever amount of daily production a producer had on July 21 the pipe line will continue to run, but any increase over that amount thereafter, whether from new wells drilled and completed, or otherwise, will be investigated by the Oil Men's Association.

Wells drilled in to comply with lease requirements will be investigated by the Oil Men's Association before being connected to the pipe line. The same rules will apply in the Bowling Green and Scottsville areas of Warren and Allen Counties. This oil ruling as it is applied here is for curtailment of production, an objective of producers in the State. Operators in the Owensboro Field are doing everything that they can to hold down a heavy production. Last winter a three-month shut down helped materially in holding down the production.

The development of the Stray sands is what caused the overproduction in the Owensboro Field, mostly found in Ohio County, and the finding of production south of the Rough River fault will mean possibly that considerable territory will develop large production as that north of the fault.

Wildcat Venture

One of the important tests now under way in the western Kentucky area is the test being drilled by the Missouri-Kansas Pipe Line Co., on the Henry Yontz farm, about 2½ miles north of the town of Rosewood, in the southern part of Muhlenberg County. It will be made a deep test to the McCloskey sand. Some years ago wells were drilled in the southern part of this county, but only to shallow depths.

Northeast of Rosewood and west of Penrod between the Twin Tunnels fault on the north and the McClellan fault on the south, and known as the Penrod oil and gas field, shallow wells were drilled that had showings of both oil and gas. However, the wells were considered unprofitable and the enterprise was abandoned. It is believed a deeper hole put down to the McCloskey sand may develop a new deep sand field.

To the south and east of the town of Rosewood and just southwest of Dunmor and across the Muhlenberg County line in the northern part of Logan County, are the edge wells of the old Diamond Springs gas pool. The old well close to Dug Hill to the west of Penrod when drilled several years ago made a fair oil showing and to the southeast and east of the Dug Hill well, fairly good gas volume was encountered in two wells. In those days a dry hole was drilled midway between Dunmor and Penrod and

(Continued on Page 123)

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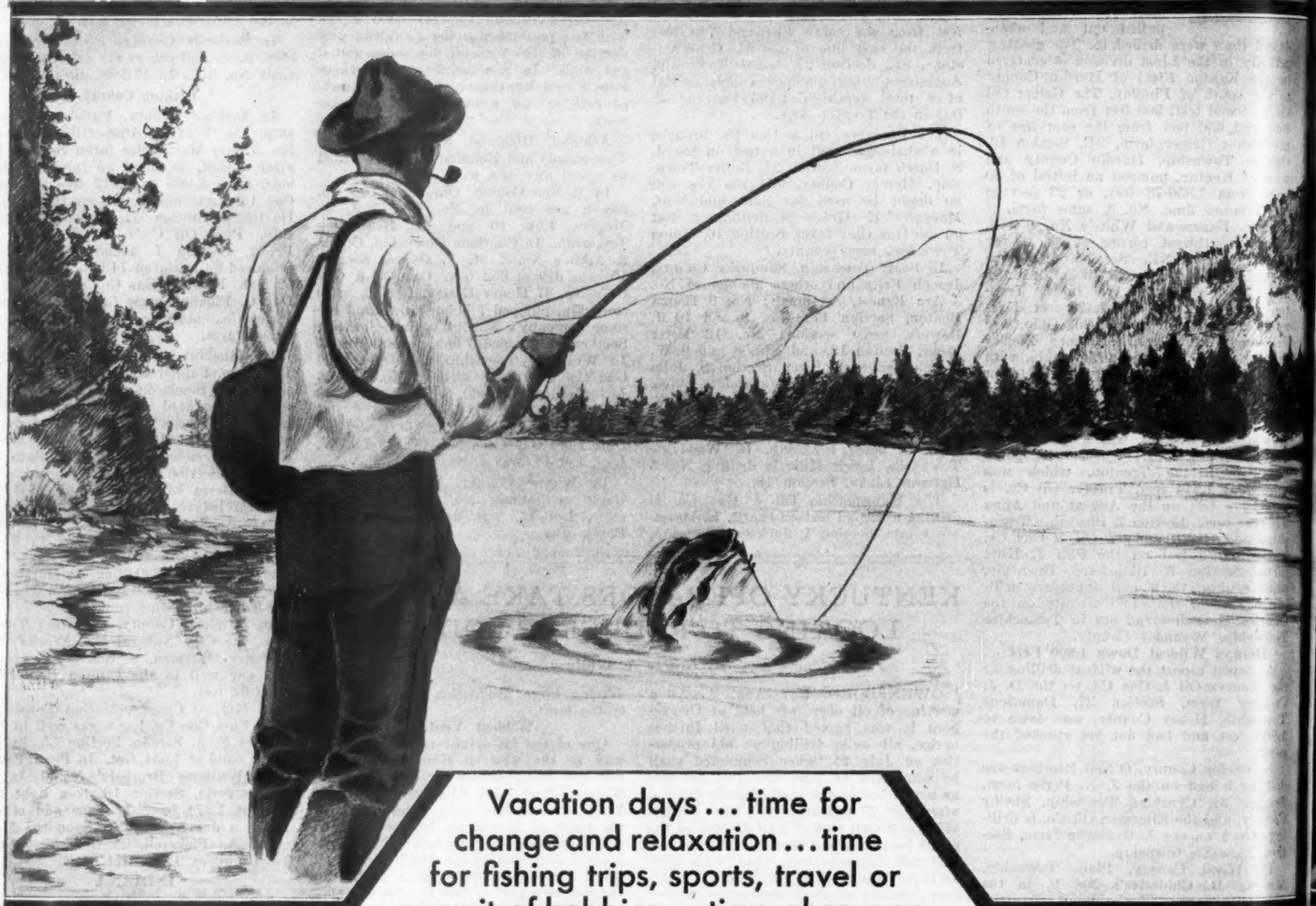

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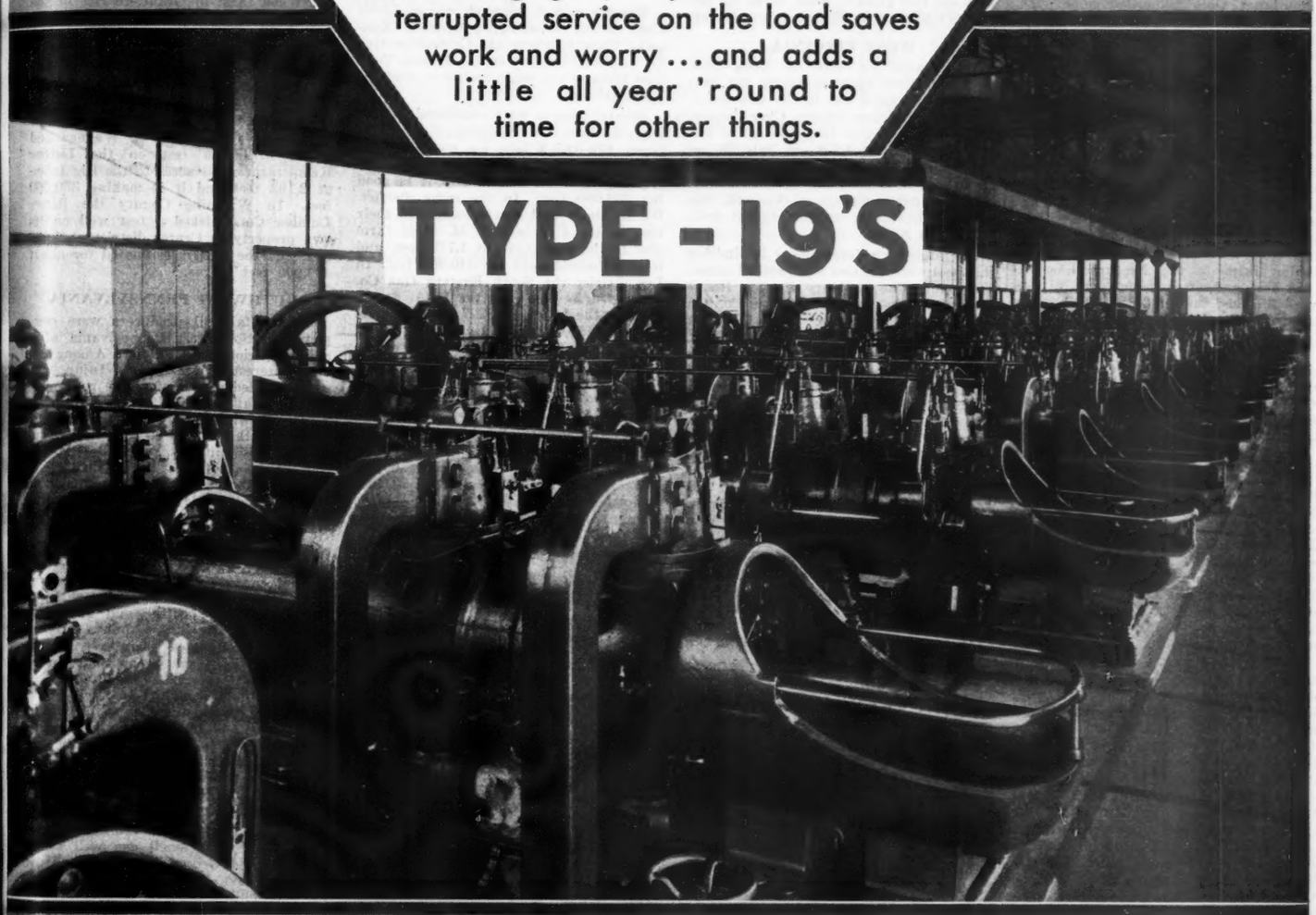

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MOUNT VERNON, OHIO GROVE CITY, PA.

Guernsey County Has Week's Best Well

Ohio Producing & Refining Co. Completes Test in Wheeling Township Which Yields 120 Bbls. in First 24 Hours

By Special Correspondent

PITTSBURGH, Pa., Aug. 4.—In West Virginia during the past week intense heat and a lack of water have seriously impaired completion totals. Only the more favorably situated wells were reported and a majority were in the gas sands. The fields in southwest Pennsylvania furnished more than the usual number of completions and many of them were fair, though there are few new rigs in this district.

Southeast Ohio completed about the same number of wells with the initial new production, 443 bbls. Except for one fair Berea completion most of the larger wells were in the deep sands. The largest well completed in the past week was in the continuation of drilling in the pool in Wheeling Township, Guernsey County. The Ohio Producing & Refining Co. completed its test on the Lizzie Little farm in the NE of Section 1 in that township to the Niagara lime at 3,690 feet and it produced 120 bbls. natural the first 24 hours. In the same township the same company completed its second well on the O. A. and Mary Quillan farm to the Niagara lime at 3,478 feet and after being shot it produced 35 bbls. the first day. This company has taken a location for their No. 3 on this farm.

A fair well was completed in Coshocton County by the Ohio Oil Co., its No. 4 on the Robert Rodhe farm in Section 6 of Clark Township. It was drilled to the Clinton sand at 3,568 feet and after being shot made 60 bbls. the first day.

Ashland County

In Ashland County the Great Lakes Oil Co. brought in a fair well from the Berea sand at only 708 feet. It was the company's No. 5 on the W. S. Wolf farm, Section 16, Lake Township, and made 40 bbls. the first day after being shot. In Section 21, of the same township, the Gold Crown Oil & Gas Co. completed its No. 3 on the Harry Morn farm to the Berea and it is showing for a 3 or 4-bbl. pumper.

Licking County had three fair new producers. In Lot 7, Hanover Township, the Pure Oil Co. completed its No. 5 on the H. C. Priest farm to the Clinton sand at 2,800 feet and after being shot it produced 75 bbls. the first 24 hours. In the active pool in Fallsbury Township, and in Section 13, the Preston Oil Co. completed a test on the Lillie Martin farm to the Clinton sand at 3,023 feet and after being shot it produced 48 bbls. the first day. In Section 13 of Hanover Township, the Hope Construction & Refining Co. completed its No. 2 on the Minor Obannon farms, also to the Clinton sand, depth 2,842 feet, and it made 51 bbls. the first 24 hours after being shot. This well is on the joint line between A. G. Minor and Charles Obannon.

Monroe County was the scene of one small producer. J. C. Christy and others completed their test on the William Martin farm, in the NW of Section 11, Bethel Township, to the Keener sand at 1,440 feet, and it was good for 2 bbls. a day natural.

In Noble County, in the SW half of Section 9, Jefferson Township, D. R. Greenlees and others completed their No. 8 on the Coal Lands to the Berea grit at 1,776 feet and it made 5 bbls. the first 24 hours and after being shot looks good for a 4-bbl. pumper. In the NE of Section 32, Enoch Township, C. D. Harper and others completed their test on the Sherman Luke farm to the Stray sand at 667 feet and it made 3 bbls. natural the first day. In the NE of Section 32, Elk Township, H. E. Schmidt and others completed their No. 3 on the C. E. Johaning farm to the Germantown sand at 749 feet and it is a small gas well.

In Muskingum County the Ohio Fuel Gas Co. drilled a test well on the B. P. Stokely farm, in the SW of Section 34, Newton Township, to the Clinton sand at 3,514 feet and has a fair gasser good for 680,000 feet.

In Tuscarawas County, Lot No. 1, Washington Township, the Gordon Oil Co.'s No. 3 and others drilled their test well on the Donald Kees farm to the Niagara lime at 3,680 feet and it is dry.

WEST VIRGINIA

There were no large oil wells completed in West Virginia during the past week. The largest was in the well developed pool in Henry district, Clay County, where the Virginian Gasoline & Oil Co. completed its No. 4,258, on July 26, on the Brown, Swan & Goshorn to the Big Injun and it is good for 12 bbls. a day. Five hundred feet south of this well, this company has a rig up and started drilling on its No. 27.

An interesting development in limiting this pool were the two wells drilled across the county line in Geary district, Roane County, by the United Fuel Gas Co. On the W. C. Ross farm, about 500 feet northwest of the O. D. Stockley farm, which has had so many good producers completed on it both in Henry district, Clay County, and in Geary district, Roane County, this company drilled its test well to the Big Injun and it is showing for a half-barrel pumper. In the same district the same company completed its No. 1,890 and a test on the Eliza Igo farm and after shot in the Injun sand it is showing for a quarter-barrel pumper.

In Boone County the Pure Oil Co. continued completions on the Lafollette, Robson and Prichard tract and brought in No. 34 good for 5 bbls. a day and No. 37 good for 4 bbls. a day. This tract is in Sherman district.

In Parson County, a little over a half mile from production, the Reserve Gas Co. completed its No. 2 on the Stephen Lhitts farm in Ten Mile district to the Speechley sand at 3,365 feet and it is estimated for a 2-bbl. pumper.

In Monongalia County, Cass district, J. B. Nuss and others completed their test on the Alph Barrachman heirs farm to the Big Injun at 2,395 feet and have a 4-bbl. pumper after shot.

Gas Wells

The gas well of the week was on Little Coal River, Washington district, Kanawha County, where the Cambridge Gas Co. completed a test on the Homer Tomkins farm to the shale and it is good for 2,000,000 feet.

Several gassers were completed in Calhoun County. In Sherman district the Great Elk Oil & Gas Co. completed its test on the Samuel Bachman farm to the Big Injun at 1,943 feet and it is good for 200,000 feet. In the same district, W. H. Daley and others completed their test on the J. J. and S. M. Maze farm also to the Big Injun at 1,772 feet, and it is estimated good for 340,000 feet. In Lee district the South Eastern Gas Co. completed its No. 6 on the L. A. Sturm farm to the Injun at 2,227 feet and it is good for 150,000 feet. In Lee district of this county F. F. McIntosh and others completed their test on the K. L. Wytsell farm to the Berea at 2,290 feet and after being shot it is showing for 200,000 feet.

In Boone County the Pond Fork Oil & Gas Co. completed a test well on the Yawkey Freeman & Co. property and has a small gasser estimated at 60,000 feet. In Sherman district, G. L. Cabot completed his No. 40 Federal Coal Co. tract and it is a gas well making 106,900 feet.

Kanawha County has an additional completion in Louden district. The United Fuel Gas Co. drilled its No. 4,262 to 1,362 feet and has a light gasser. In Logan County, Logan district, the Clendenin Gas Co. drilled its No. 5 on the Boone County Coal Corp. tract and it is dry.

In Mannington district, Marion County, the Philadelphia Gas Co. has started drilling a test well on the William Snider farm deeper from 2,182 feet and reached the top of the Maxon sand at 2,280 feet and at present the well is drilling at 2,325 feet.

In Ritchie County, Moyer, Lee and others completed their test on the James W. Webb farm in Grant district to the Big lime at 1,850 feet, and it was dry in all sands. In Union district the Warrior Petroleum Co. completed its No. 6 on the H. McGinnis farm and it is also dry. In Clay district the Philadelphia Gas Co. completed a test on the E. E. Hess farm and it is a duster.

In Wirt County, R. C. Wagner and others drilled a test on the Luther Kemp farm of 13 acres to the Big Injun at 2,193 feet and it is making 330,000 feet. In Wyoming County the Ritter Lumber Co. finished a test well on its own property in Center district at 4,002 feet, and the well is estimated for about 400,000 feet of gas.

SOUTHWEST PENNSYLVANIA

Several fair oil producers were completed in Southwest Pennsylvania after a long period of inactivity. Among the most interesting was an old Injun sand gasser drilled deeper after the rock pressure had fallen away. This was in East Finley Township, Washington County, and was the test well on the Logue farm drilled in last year by H. V. Sprouls and others. After drilling it deeper to the Fourth sand it is making about 20 bbls. a day. In South Franklin Township of this county, the Carnegie Natural Gas Co. completed its No. 3 on the H. F. Taylor farm to the Fifth sand and it is good for 20 bbls. a day. In the same township, the same company drilled its No. 5 on the A. C. Lindley farm to the Fifth sand and it is also making 20 bbls. a day. Day & Baumgard completed their test on the Rankin Clark farm in South Franklin Township to the Fifth sand and it is good for 10 bbls. a day. In Cecil Township, Harry Kreider & Co. completed No. 2 on the Cook farm to the Fifth sand at 2,245 feet and it is showing for a 5-bbl. pumper. In the same township, the Bishop Oil & Gas Co. completed its No. 3 on the Tannehill farm and it is dry.

In Allegheny County, Mount Nebo Township, the Manufacturers Light & Heat Co. had a small gas well in its No. 1 David George farm in the Third sand with the Berea grit packed off. It recently pulled the packer and in testing the Brea grit has found that sand productive for about 3 bbls. a day. In Kennedy Township, Harold S. Lorish completed his test on the George Gisher farm and it is dry in all sands.

In Buffalo Township, Butler County, the T. W. Phillips Gas & Oil Co. completed its No. 6 on the Chester Harvey farm to the Fifth sand at 2,097 feet and has a 4-bbl. pumper.

Gas Wells

In Washington County, Morris Township, the Carnegie Natural Gas Co. completed its test on the Charles Moredock farm to the 30-foot sand at 2,981 feet and it is a gas well making 200,000 feet. In South Franklin Township, the same company completed its test on the L. Hathaway farm to the Fourth sand at 2,731 feet and it is making about 300,000 feet of gas. In North Bethel Township, the same company completed its No. 3,436 and on the L. A. Ames farm to the Big Injun at 1,902 feet and it is a fair well good for 500,000

(Continued on Page 123)

SIX IN CREW IF YOU COUNT THE DOG—AND YOU MUST

Trosper is the one without a hat in this picture taken at the Cromwell-Franklin Trosper gasoline plant, Oklahoma City. The others, left to right, are: J. F. Looker, superintendent; J. O. Cook, stillman; Carl D. Barker, treater; G. L. Kennedy, stillman; R. L. (Bob) Miller, engineer. The dog—nobody around the plant knows where he came from—was struck by a truck nearby. A shoulder was broken and he was hurt otherwise. It looked like a hopeless case, but the plant employes made a cast and performed a bit of surgery which, along with careful nursing, brought the accident victim back to health and usefulness. They named him Trosper and the dog, showing his appreciation of the kindness accorded him, serves as mascot and vigilant sentry.

Summoning a Ghost to your bidding

The chemist Van Helmont in 1609 discovered an invisible substance, an emanation from coal, that he named "geist," meaning ghost, shortened in English to gas.

Only now do the miraculous possibilities of service to mankind from this Ghost begin to be glimpsed. Only now can modern industry, like a latter-day Aladdin rubbing his lamp to summon a vaporous genii, turn a valve and order this Ghost to any one of a hundred tasks. Only now are there practical, economical methods of producing, conveying, storing, controlling, harnessing it.

From the beginning, the problem was one of piping. When Crane Co. a half century ago set itself to develop and produce the right materials for every gas and oil purpose, they began an incalculably valuable contribution to the solution of problems that had held back the gas industry since the Chinese used hollow bamboo.

Natural and manufactured gas men, laying their lines and their plans to solve old problems, to open fresh markets, to take advantage of new possibilities, will find in the Crane line of valves, fittings, fabricated piping, and specialties exactly fitted to their needs, materials to equip gas well or manufacturing plant, booster station, pipe lines, even the gas cocks for a user's basement.

In the piping specialists stationed at strategic points throughout the country to serve the gas and oil industries, they will find informed and experienced advisors, glad to give all co-operation.

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1855
SEVENTY-FIFTH
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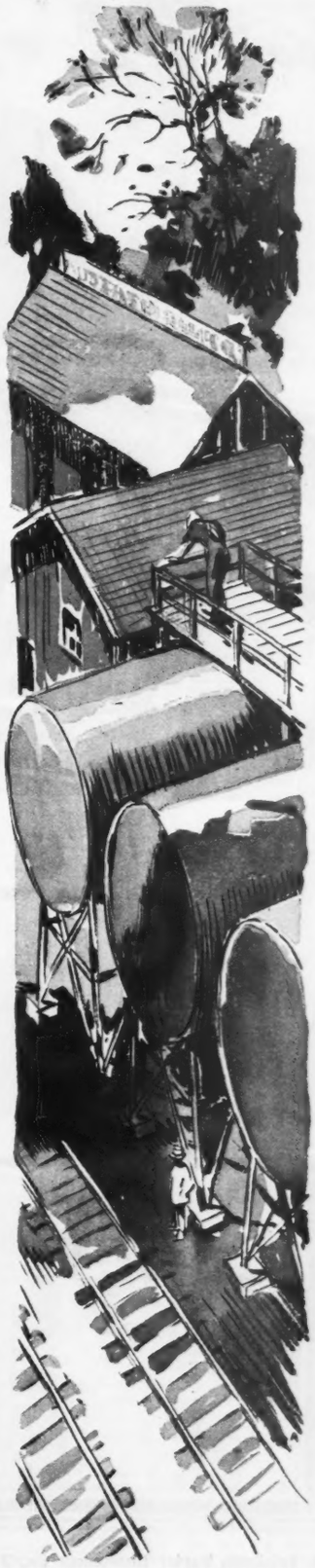


In tanks like this, that are the bottles where the ghost of coal and natural gas is imprisoned for storage, Crane valves help to make control absolute.

Caught While Scouting the Oil Fields With a Camera

1—E. H. Triphaus, Taylor Instrument Co., Tulsa; Dr. E. R. Lederer, Texas Pacific Coal & Oil Co., Fort Worth, Tex.; D. B. Hiatt, Texas Pacific Coal & Oil Co., Thurber, Tex.; and R. E. Miller, secretary, National Gasoline Association, Tulsa. 2—Dick Dickinson, salesman, Carson Machine Co., Oklahoma City, Okla.; Harry Minard, Ajax Iron Works; M. E. Bond, Bond & Tippitts Drilling Co.; and A. H. Carson, Carson Machine Co. 3—R. W. Alexander, Jim Owens, Jess W. Layton, and J. M. Cutforth, warehouse office group, Empire Gas & Fuel Co., Oil Hill, Kans. 4—R. D. Parker, supervisor of the Oil and Gas Division, Railroad Commission of Texas. 5—E. E. Smith, S. H. Pope and T. T. McCullough, Gypsy Oil Co., Tonkawa, Okla. 6—Roy Turner, Charles Gallop, Miss Henryetta White, Orin Day and Harry Cousland, Empire Oil & Gas Co., Oil Hill, Kans. 7—C. B. Stultz, safety department, Humble Oil & Refining Co., Cisco, Tex. 8—Scott Midland, truck pusher; A. G. Rosser, pipe foreman; L. V. McNeeley, general construction foreman; and Paul C. Wallock, assistant superintendent gasoline and gas lift plant, Indian Territory Illuminating Oil Co., Oklahoma City, Okla.

Pipe Line Construction News

WYOMING-MONTANA PIPE LINE CO. INCORPORATED

DENVER, Colo., July 29.—The opening of the Byron Dome as a new black oil field came concurrently with an announcement that the Wyoming-Montana Pipe Line Co. has been incorporated under the laws of Delaware with a capital of 100,000 shares of no par value to construct a 160-mile system connecting the black oil fields in Hot Springs, Big Horn and Park Counties with refineries at Billings and Laurel, Mont. Application for permission to construct the line, which will be built of 8-inch pipe, has been made to the Interstate Commerce Commission.

The refineries of the Laurel Oil & Refining Co. at Laurel, Mont., and the Yale and Russell Companies at Billings, Mont., are running about 6,000 bbls. of crude per day, most of which comes from Oregon Basin. The crude is hauled by rail from Cody and by piping the oil to its destination, there will be a saving in transportation costs.

Billings is considered an ideal location for the building up of a refining business due to its strategic location at a point where the Great Northern and Northern Pacific transcontinental railroads meet and where the Burlington-Colorado & Southern north and south route connects with the other lines.

The officers and directors of the Wyoming-Montana Pipe Line Co. are Ray Pheubus of Thermopolis, president; Canton O'Donnell of Denver and Paul Stock of Cody, vice presidents; Warren D. Skelton of Thermopolis, secretary; A. D. Johnston of Denver, treasurer, and D. W. Strickland of Denver and Robert Connaghan of Cheyenne, additional directors.

WORK STARTS ON LINE INTO MEXICAN CITIES

SAN ANTONIO, Tex., Aug. 4.—The work of laying the new Chittim Field-Eagle Pass natural gas pipe line of the Texas Gas Utilities Co., subsidiary of Appalachian Gas Corp., has been started, according to Ross Holmes, chief engineer. This begins the second project in the company's main pipe line construction program, the first being the Chittim Field-Devil's River line, through which deliveries of natural gas were commenced last June to the new electric generating plant of Central Power & Light Co.

The line now being built will run through the new $6,000,000 Maverick County irrigation project en route to Eagle Pass, continuing on to the middle of the International Bridge, where present plans call for the delivery of natural gas in the city of Piedras Negras through a Mexican distributing company, or else continuation of the line by the company into Mexican territory.

Piedras Negras is one of the more important Mexican border cities, having a population of about 20,000 and a number of industries. At present the sole sources of heat are kerosene and wood, no gas being available. Present plans call for the completion of the new line by September 1.

PERMIT ASKED IN KANSAS

TOPEKA, Kans., Aug. 4.—Application for permission to construct a gasoline pipe line across Kansas from Barnsdall, Okla., to Kansas City has been filed with the public service commission by the Great Lakes Pipe Line Co., owned jointly by the Continental Oil Co. and the Barnsdall Oil Co. The pipe line, the application stated, would extend from Barnsdall to Kansas City, and thence to Des Moines, Iowa, Chicago and St. Paul. A branch also would extend to Council Bluffs, Iowa.

WORK TO START SOON ON GAS LINE CONNECTING VENTURA WITH ELWOOD

LOS ANGELES, Calif., Aug. 4.—Work will start within 45 days on a $600,000 natural gas pipe line between Ventura and the Elwood oil field, to be built by the Southern Counties Gas Co.

Survey of the project is under way and rights of way now are being obtained for the 16-inch line, which will extend 37 miles to hook up Elwood with the three gas lines leading from Ventura to Los Angeles.

The new supply line, it is understood, will augment the quantities of gas now being pumped from Ventura. The three lines running from Ventura to Los Angeles are a 12-inch line of the Southern Counties Gas Co., a 15-inch line of the Ventura Fuel Co. and a 12-inch line of the Southern California Gas Co.

If the gas supply from the Ventura Avenue Field is not sufficient to keep the present lines running at full capacity the new line from the Elwood Field near Santa Barbara will be put into use.

While it is said by officials of the gas company that this latter action is problematical, depending on conditions in the Ventura Avenue Field during the "peak" months of winter, they have confirmed the report that the contract probably will be let in August for the new line and that work probably will start September 1.

Plans for the fuel line are being prepared by the General Pipe Line District of the Southern Counties Gas Co., which handles transmission lines and production from Gaviota to Glendale.

LINE TO BE BUILT FOR MICHIGAN NATURAL GAS

MUSKEGON, Mich., Aug. 4.—The Consumers Power Co., one of the largest public utilities in Michigan, has contracted to purchase the natural gas output of the Isabella Oil Development Co. of Mount Pleasant, it is announced by Charles W. Tippy, vice president and general manager.

Pipe lines to gather and distribute the gas will be laid immediately by the Michigan Natural Gas Corp., a subsidiary of the Isabella Oil Development Co., now in the process of organization. The subsidiary has contracts to handle the output of the Development company's wells and is negotiating contracts with other operators at a minimum price of 12 cents per 1,000 feet at the wells.

The Isabella company has 4,000 acres under lease in western Isabella County where two gas wells, one with an open flow capacity of 10,000,000 feet and the other good for at least 2,000,000 feet, already have been completed in the Marshall formation.

Five representatives of the Consumers Power Co. gas operation, construction and right of way departments are assisting the Michigan Natural Gas Corp. to acquire rights of way and survey the territory for construction of the first 6-mile gas pipe line from the Broomfield Township wells to Mount Pleasant.

MAGNOLIA HOBBS OIL LINE

SAN ANTONIO, Tex., Aug. 4.—The Magnolia Pipe Line Co. is surveying for an 8-inch pipe line from Hobbs Field, New Mexico, to Wink, Tex., a distance of 55 to 60 miles. The line will connect with the company's 8-inch line from Wink to Midland and a looped 8-inch from Midland to Beaumont. Magnolia's runs from its line from Winkler County to Midland averaged 6,867 bbls. daily in June, compared with 7,060 bbls. daily in May.

MORE EASTBOROUGH PIPE LINE

The Truman-Smith Construction Co. of El Dorado, Kans., has been awarded the contract for 10½ miles of 4-inch pipe line which the Vickers Petroleum Co. is to build from its Eastborough oil properties east of Wichita, in south central Kansas, to the Empire Oil & Refining Co.'s 12-inch line. The Derby Oil Co. is handling its own oil through a 4-inch line and is preparing to build a permanent pump station in the new pool on the Rimel lease on the south side of Kellogg Street.

WORK ON COMPRESSOR STATION IS STARTED

CHICAGO, Aug. 4.—Construction of the first compressor station that will be used by Missouri-Kansas Pipe Line Co. to boost natural gas from the Panhandle of Texas to Indiana on the new 1,250-mile line, has been started, according to company officials. The location is 12 miles northeast of Liberal, Kans., on the Cimmaron River. The station will have four compressor units of 1,000 horsepower each.

Work will begin on a second compressor station a little later, on a newly acquired tract of 80 acres near Louisburg, Kans. This station, the second to be built, will contain five compressors units of 1,000 horsepower each.

The third and probably the final compressor station for the huge pipe line system is to be located somewhere east of the Mississippi River, it was stated.

The company has acquired a half interest in 30,000 acres of natural gas lands in the Hugoton Field in southwestern Kansas, in parts of Grant, Stevens and Morton Counties.

FIRST CONTRACT AWARDED

First contracts for the construction of the 1,000-mile 24-inch pipe line from the Texas natural gas fields to Chicago to cost $100,000,000 have been awarded by the Continental Construction Co. of Kansas City, Mo., to Sheehan Brothers of Tulsa, Bechtel & Kaiser of San Francisco, Gord, Bacon & Davis, Inc., of New York Citq, and Smith Brothers of Dallas, Tex.

CANADIAN GAS LINE

CASPER, Wyo., Aug., 2.—The new pipe line that will be the first to carry natural gas from Canada into the United States is starting work. The trucks are stringing the pipe from Telstad to Whitlash on the Canadian side of the line. This line will be 10-inch on the trunk line, with an 8-inch branch to the Rogers Imperial gasser from Whitlash and about 5 miles of 6-inch gathering system. The whole length will be about 55 miles.

INVESTMENT IN PIPE LINES

The Interstate Commerce Commission, in a statistical statement just issued regarding pipe line companies reporting to it, showed 37 companies for the calendar year 1929 had aggregate investment of $741,010,196 in pipe lines and $104,445,372 in other investments and a net income of $142,216,242.

COMMENCE CONSTRUCTION OF INTERNATIONAL LINE

CHATHAM, Ontario, Aug. 4.—Announcement has been made of the pending construction of an international pipe line to link the Rogers-Imperial gas field in southern Alberta with existing Montana pipe line systems. The new line is part of a program of extension ultimately designed to serve Butte, Anaconda and Helena. A $250,000 booster station installed several months ago in Telstad, Mont., is part of the program.

The new line, on which work is being commenced, will connect the Sweetgrass Hills area in Montana and the Rogers-Imperial Field with the present pipe line of the Northwest Utilities Co. at Telstad. From Telstad, 10-inch pipe will run northeast 35 miles to Whitlash, from which point a 6-inch line will be laid to the Patterson gas wells in Montana and an 8-inch line to the Rogers-Imperial gasser in Alberta. The entire project will involve about 55 miles of line, and will occupy about 175 men for two months.

The Rogers-Imperial well was drilled some years ago as a joint test by the Canadian Oil & Refining Co., headed by the late Mark Rogers of Lethbridge, and Imperial Oil, Ltd. It developed a large dry gas production, estimated at 65,000,000 feet, from two sands. This production was shut in for lack of a market. Subsequently it was taken over by the Range Oil & Gas Co. of Calgary, which, after prolonged effort, obtained from the federal and provincial governments permission to export the gas. Range's No. 2 well is now drilling on the same structure.

MAY EXTEND WYOMING LINE

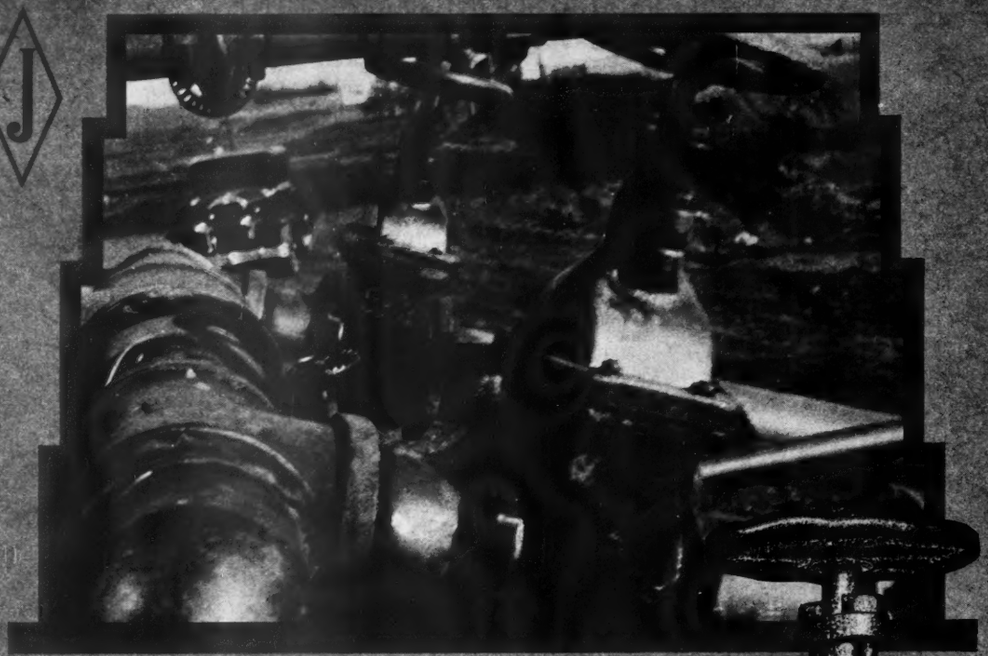
CASPER, Wyo., Aug. 2.—The Minnesota Northern Utilities Co. has reached an agreement with the Broadview Oil & Gas Co. to drill six wells in six months, on the Broadview Dome, Stillwater and Yellowstone Counties, about 30 miles northwest of Billings. The Minnesota Northern Utilities Co. has a franchise to serve gas to the city of Lewistown, Mont. There is no gas supply available, however, for this city and the contract for the six wells is an effort to find a supply. It is also reported that in case the Broadview Dome is not productive to furnish this gas, the company may reach an agreement with the Smith interests and extend the line now being laid in northern Wyoming, to Lewistown, Mont., and thus secure gas from Wyoming. The line in Wyoming is being laid with 8-inch pipe and the joints are 40 feet long, plain end. This end is thought to be larger than necessary for the supply of gas to Buffalo and Sheridan, Wyo.

CHAMPLIN SURVEYING LINE

Champlin Refining Co., with headquarters in Enid, Okla., is surveying for a pipe line into the Oklahoma City Field, from whence it will ship crude oil via its Lovell line to its Enid refinery. The new pipe line will be 8-inch in size but its capacity has not yet been determined, because the company has not fived the number of pumping stations that it will construct. Champlin expects to start construction of the line by August 15, as the pipe has been ordered. Survey is expected to be completed shortly and crews will be immediately set to work clearing the right of way.

BRITISH EAGLE PLANS LINE

British Eagle Oil Co. plans a 140-mile pipe line from the Furbero Field to Mexico City.



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New Pool in Andrews County Forecast

Prediction Based on Big Gas Flow Encountered in Well Being Drilled by Fuhrman Petroleum Co. 6 Miles South of Production

By L. E. Bredberg
Fort Worth Bureau, The Oil and Gas Journal

FORT WORTH, Tex., Aug. 4.—As large production of gas in a wildcat in the Permian Basin, West Texas, is generally a forerunner of production, Andrews County now appears likely to see the opening of another pool, or the extension of the pool which was opened several months ago in Section 6, Block A-46 by the Deep Rock Oil Co. and others on the Ogden ranch. The Fuhrman Petroleum Co., which is drilling in the SE, Section 16, Block A-43, 6 miles south of the two producers in the area named, created excitement when its test encountered gas estimated at 50,000,000 to 200,000,000 feet in capacity from 4,062-67 feet.

The first gas in this test was found at 2,950 feet. An increase was encountered at 3,994 feet with another increase at 4,001-02 feet. An estimated 2,000,000 feet was encountered at 4,055-60 feet and at 4,062-67 feet wild guesses were being made as to how much it would really make on a test. The Ogden discovery well, producing at 4,428 feet, and its south offset, which also is producing about 25 bbls. a day, flowing, at a total depth of 4,454 feet, are directly north of the Fuhrman No. 1 Ford.

Deep Rock Oil Co. and others' No. 1 Mathis, in the SW cor., Section 4, Block A-46, 1½ miles east of the Ogden discovery, was drilled to a total depth of 5,088 feet, but plugged back to 4,465 feet. It was shot with 520 quarts from 4,257-4,465 feet and with a second shot of 160 quarts from 4,168-4,232 feet. It is now cleaning out with 3,000 feet of fluid in the hole, with the water exhausted and appears likely to make a small producer as it stands. This will make the third producer for Andrews County, and this area now looks as if it might be on the northeast flank of large production since the striking of such a large quantity of gas in the Fuhrman test to the south.

New Interest Stirred

Due to the fact that the Deep Rock Oil Co.'s wells have been slow in completion, and appearing as but small producers, this area has lost much of the interest first engendered by the discovery on the Ogden ranch, but the late showing made to the south will stimulate interest to a great pitch, and Andrews County, especially the surrounding area, and northern Ector County may expect many more tests.

Penn Oil Co. and others' No. 1 Wilson, in Section 20, Block A-37, to the northwest of the Ogden discovery, in Andrews County, is now shut down at 4,650 feet waiting for a drilling line. This test has also created interest due to the fact that it encountered an oil pay at 3,085 feet, and has bailed and flowed oil of 38.5 gravity. The small flows are made about every three days between the 8 and 10-inch casing. The 8¼-inch casing is set at 3,112 feet.

The Penn Pool, Ector County, went on proration August 1, cutting that field to about 55 per cent of its daily potential, or to 10,000 bbls. per day, which quantity the pipe line companies serving this pool elected to take for the first 15-day period from August 1 to August 15, when a new basis for proration may be used if pipe line companies alter their nominations for the next 15-day period.

Proration for the pool was adopted by the advisory committee at a meeting in Fort Worth, August 27. Operators had requested 12,000 bbls. production per day, but 2,000 bbls. was slashed from this amount when the pipe line nominations totaled only 10,275 bbls. daily. The wells totaled 18,350 bbls. on the eve of proration.

Better Well Than Expected

The Texas Company and Cosden Oil Co.'s No. 8 Connell, in the SE cor., Section 2, Block B-16, in the northwest corner of the Penn Pool, Ector County, is now flowing about 375 bbls. per day, and making a much better well than was expected at first. Top of the pay of this extension well was logged at 3,498 feet with an increase at 3,550 feet. Before shooting it looked like an exceptionally small well for the field, but a 300-quart shot from 3,480-3,596 feet disintegrated the tight lime and changed the outlook. The well flowed 258 bbls. in the first 12 hours after the shot.

Sunray Oil Co. and Llano Oil Co.'s No. 1 Jones, in Section 6, Block 44, is recementing casing. This test is about one-half mile north of the Shell Petroleum Corp.'s producer on the north end of the Penn Pool, Ector County, and limits production in this direction. It was drilled to a total depth of 3,823 feet but was plugged back to 3,817 feet after encountering sulphur water at 3,820-23 feet. A 40-quart shot was set off from 3,788-3,808 feet, and the well was then plugged back to 3,812 feet after cleaning out. Chances for a commercial producer seem rather slim at the present outlook.

R. R. Penn and others' No. 1 Goodman and others, in the SE cor., Section 27, Block 44, Township 1n, T.&P. Survey, encountered two more showings of oil while drilling this last week. The first was found at 4,045 feet after a showing of gas was logged at 4,007 feet. A second showing of oil was encountered from 4,120-30 feet. It is now drilling at 4,220 feet in lime with no further showings of gas or oil. It is running about 150 feet lower than Fuhrman's No. 1 Ford, to the north in Andrews County.

Howard-Glasscock Situation

A serious situation faced the Howard-Glasscock producers when the Cosden Oil Co. announced a cut in its purchases in fields of those counties. As a consequence the advisory committee recommended that the Railroad Commission issue a temporary order revising regulations previously adopted for the proration of this field, and the wells in the west area be allowed to produce 50 bbls. each daily, while the Roberts and Henshaw areas be allowed to give the highest possible maximum allowance per well in those two areas, permitting all wells whose capacity is less than said maximum allowance to produce their full capacity. The maximum allowance heretofore was 175 bbls. per well in the Roberts and Henshaw areas, but due to the decrease in outlet for the field, this was cut.

A board of engineers had been appointed to study these fields and this board recommended that no wells be cut under 175 bbls., due to water intrusion and damage to the wells if this was done, but regardless of the board's advice the field had to be curtailed still further in order to meet the decrease in pipe line demands.

The Roberts - Settles - Phillips - Coffee Fields in Howard-Glasscock County are now prorated to 12,504 bbls. per day being the amount the pipe lines connected to the fields elect to take during August 1 to August 16, 1930.

COMPLETIONS IN WEST TEXAS

Week ending August 2

Howard County

Godley Oil Co.'s No. 16 A. J. Hooks (recompleted), top pay 1,850 feet; shot 40 quarts from 1,934-50 feet; initial production 50 bbls.; total depth 1,953 feet.

Crane County

Church and others' No. 3 University, top pay 2,942 feet; shot 510 quarts from 2,941-3,098 feet; initial production 230 bbls. first 24 hours; total depth 3,098 feet. Magnolia Petroleum Co.'s No. 3 State University-Lassiter, top pay 3,014 feet; shot 150 quarts from 3,011-84 feet; initial production 130 bbls. per day; total depth 3,084 feet. Tidal Oil Co.'s No. 2-C University, top pay 2,985 feet; first shot 120 quarts from 2,987-3,067 feet; flowed 95 bbls. in 24 hours, second shot 320 quarts from 2,987-3,099 feet; initial production 104 bbls. in 17 hours; total depth 3,107 feet.

Coke County

Lipan Oil Co.'s No. 1 Rawlings, dry and abandoned; total depth 3,535 feet.

Pecos County

Buell & Hagen and Independent Oil & Gas Co.'s No. 1 Pecos Valley Oil Co., estimated 2,000,000 feet of gas from 1,545-57 feet; shot oil 1,586 feet; initial production 3 bbls. per day; total depth 1,625 feet. Galt Brown Co.'s No. 1 Neville, dry and abandoned; show oil at 1,720-40 feet; total depth 1,774 feet. Hayes and others' No. 1 Lea, location abandoned. Henshaw Brothers and others' No. 3 University, top pay 1,002 feet; shot 20 quarts from 1,004-16 feet; reshot with 30 quarts; initial production first 12 hours 50 bbls.; total depth 1,024 feet. Humble Oil & Refining Co.'s No. 1 C. L. Thompson, dry and abandoned; total depth 429 feet. Mid-Kansas Oil & Gas Co.'s No. 9 Mrs. M. A. Smith, top pay 1,415 feet; initial production 182 bbls. per hour; total depth 1,674 feet. Phillips Petroleum Co.'s No. 3 Monroe, top pay 1,267 feet; initial production 25 bbls. per day; total depth 1,358 feet. California Oil Co.'s No. 9 Mrs. M. A. Smith, top pay 1,677 feet; initial production 79 bbls. per hour; total depth 1,850 feet. W. F. Walsh and others' No. 1 Scharbauer Cattle Co., dry and abandoned; total depth 2,887 feet.

Reagan County

Kemrow Oil Co.'s No. 1 Sawyer Cattle Co., dry and abandoned; total depth 2,820 feet.

WEST TEXAS PRODUCTION

Week ending August 2

County—	Wells	Prod.
Andrews	1	116
Crane	347	32,965
Crockett	48	1,820
Ector	55	17,530
Fisher	7	1,799
Garza	5	51
Howard-Glasscock	520	29,255
Irion	5	195
Jones	73	1,355
Loving	24	1,751
Mitchell	146	2,208
Pecos	487	105,850
Reagan	258	21,425
Runnels	3	11
Scurry	5	12
Taylor	2	110
Upton	249	6,526
Ward	25	2,497
Winkler	597	73,145
Total production this week		298,620
Total production last week		298,707
Decrease		87

Runs Through Trunk Lines

Company, size and location—	Bbls.
Atlantic, 10-inch, Houston	28,000
Gulf, 10-inch, Ranger	43,309
Humble, 2-8-inch, San Angelo	39,056
Humble, 10 and 12-inch, Station "A"	51,732
Illinois, 2-8-inch, Del Rio	27,769
Magnolia, 8-inch, De Leon	24,346
Pasotex, 8-inch, El Paso	13,228
Shell, 10-inch, Healdton	35,288
Shell, 10-inch, Houston	24,720
Texas, 12-inch, Houston	21,254
Total	307,702

Runs to West Texas Refineries

Amarillo Ref. Co., Pyote	None
Big Spring Ref. Co., Big Spring	1,491
Burford Ref. Co., Pecos	5,273
Bluebonnet Ref. Co., Wickett	None
Cosden Ref. Co., Big Spring	7,677
Col-Tex Ref. Co., Colorado	6,500
Great Western Ref. Co., Big Spring	2,629
Humble Oil & Ref. Co., McCamey	None
Mid-Tex Ref. Co., Midland	None
Richardson Ref. Co., Big Spring	6,105
Tonkawa Ref. Co., Pyote	1,911
Wickett Ref. Co., Wickett	155
Total	31,751

Tank Car Shipments

Fox and Thorsen from Mertzon	196
Thomas and Brann from Grant City	266
Orient from Hurdle	85
Southern Crude from Wickett	19,831
Total	20,378
Total daily average distribution	359,831
Total daily average production (including Lea County, N. Mex.)	335,830
Daily average from storage	24,001

WILDCAT OPERATIONS IN WEST TEXAS

Week Ended August 4

ANDREWS COUNTY

Company, well, farm name, section and block—	Remarks—
Deep Rock Oil Co. et al's No. 1 Mathis, 900 ft. from S and W, Sec. 4, Blk. A-46, Public School Land	Cleaning out; 300 ft. fluid in hole; total depth 5,088 ft.
Deep Rock Oil Co.'s No. 1 Miles, 900 ft. S, 1,650 ft. E of NW cor., Sec. 22, Blk. A-46, School Land	Shut down 4,765 ft.
Fuhrman Pet. Corp.'s No. 1 Ford, 440 ft. from S and 2,200 ft. from W of Sec. 16, Blk. A-43, Public School Land	Fishing for bit 4,011 ft.
Deep Rock Oil Co. et al's No. 1 King, 330 ft. from N and 2,310 ft. from E, Sec. 11, Blk. A-46	Flows 25 bbls. average per day; flows every four days; total depth 4,454 ft.
Maer & Staniforth's No. 1 Meador, C SW Sec. 8, Blk. A-41	Drlg. 1,336 ft.
R. R. Penn's No. 1 Wilson, C Sec. 20, Blk. A-37, School Land	Drlg. 4,630 ft.

BREWSTER COUNTY

Brewster Oil Co.'s No. 1 fee, 2,640 ft. S and 2,598 ft. E of NW cor., Sec. 45, Blk. G-15, G.C.&S.F. Sur.	Shut down 1,935 ft.
E. L. Chapman's No. 1 Skinner, C SW SE, Sec. 100, Blk. 2, G.C.&S.F. Sur.	Shut down 1,302 ft.
Trans-Pecos Oil & Gas Co.'s No. 1 Jones, 920 ft. from N and 2,500 ft. from E of Sec. 18, Blk. G-15, G.C.& S.F.R.R. Sur.	Show oil 1,830 ft.; shut down 2,345 ft.
Van McPhail's No. 1 McIntyre, SE cor., Sec. 59, Blk. 352, 7 mi. S of Alpine	Shut down 1,750 ft.

COKE COUNTY

Arkansas Fuel Oil Co.'s No. 1 Stepp, 1,020 ft. NE, 2,340 ft. W of SE cor., Sec. 35, Blk. 1-A, H.&T.C. Sur.	Drlg. 3,655 ft.

CONCHO COUNTY

Beesley et al's No. 1 S. Waring Est., 1,320 ft. from S and E of A. T. Robinson Sur., Abst. 2,120	Machine.
Turner et al's No. 1 Borsig, 150 ft. from S of NE cor., G. Emmig Sur. 130, 6 mi. W of Paint Rock	Drlg. 1,420 ft.

CRANE COUNTY

Cranfill Bros. and Gulf's No. 1 J. B. Tubb, 2,310 ft. from N and 330 ft. from E of Sec. 8, Blk. B-27, Public School Land	Show oil 2,995 ft.; shut down 3,993 ft.; rig burned.
C. C. Duffey's No. 1-C Cowden Bros. & Co., 2,640 ft. from S and 3,960 ft. from W of Juan Cordona Sur.	Drlg. 385 ft.

(Continued on Page 114)

Deep Rock's Test Looks Like a Well

No. 1 Lawson in Southwestern Cooke County Shut Down to Be Standardized After a Good Showing of Oil at 1,331 Feet

By L. E. Bredberg
Fort Worth Bureau, The Oil and Gas Journal

FORT WORTH, Tex., Aug. 4.—Deep Rock Oil Co.'s No. 1 Lawson, in the southwest corner of the Harriet Nail Survey, Abstract 790, one-half mile southeast of Hood in the southwestern part of Cooke County, was showing up for a wildcat discovery after encountering an oil sand from 1,308-21 feet, and a saturated lime from 1,321-31 feet. It is now shut down at the latter depth. Oil filled up 1,000 feet in 10 hours, and swabbed at the rate of 10 bbls. per hour for two hours, and swabbed 90 bbls. in 16 hours.

The test is now being standardized. The showing made by the test has already stimulated leasing and royalty trading in the area, and although the Wichita Falls district is right now suffering for lack of adequate pipe line demand for its production, a new discovery will increase activity in the surrounding area.

Danciger Oil & Refining Co.'s No. 1 Fleitman, located in the northwest corner of the 55-acre tract in the J. R. Clark Survey, on the east side of Cooke County, which has promised the opening of another pool in the county, has been completed for only 18 bbls. of oil and 72 bbls. of water per day at a total depth of 957 feet. Top of the pay was logged at 950 feet. Although this discovery well is not so large itself, it may lead to the discovery of better wells on surrounding acreage which is due to be tested in all directions as there are no dry holes or other tests in the immediate vicinity of this small discovery well.

Shoupe Brothers' No. 1 G. H. Aldon, located 410 feet from the north and 330 feet from the east of Section 98, Block 16, H.&G.N. Survey, Moore County, which attracted much interest a short time ago when it encountered a granite wash pay at 2,194-97 feet and swabbed 10 bbls. of 34 gravity oil, has been taken over by Tinsley and others and contributions are asked of other nearby operators for deepening the test. It is now shut down at 3,046 feet. Besides the showings found at 2,194-97 feet it also had oil showings at 2,725 feet, 2,867 feet, and 2,900 feet.

A short pipe line from the Green Oil Co.'s No. 1 Morgan, 2½ miles northwest of the Graham Pool, Young County, which extended production in that field, or opened up a separate pool a few weeks ago when it was completed for a commercial producer, to a loading rack on the Wichita and Southern Railroad tracks, will soon be completed and the production shipped out to a Wichita Falls refinery which has contracted for the production. The line is a 3-inch.

The Lone Star Gas Co. completed the largest gasser yet produced in the area 6 miles northwest of Cisco. This well is No. 7 Groves belonging to the company and is located 2,190 feet from the north and west of Section 487, S.P.R.R. Survey. It topped the Lake sand at 3,568-72 feet and is shut down at the latter depth making 62,400,000 feet of gas daily with 1,290 pounds rock pressure. Last week the same company completed another large gasser, No. 6 Groves for an initial flow of 35,200,000 feet of gas, in the same section.

The George Pool, Brown County, produced 309 bbls. for a daily average during the past week.

WICHITA FALLS COMPLETIONS
Week ending August 2

Archer County

Bridwell Oil Co.'s No. 1 Green, top pay 1,110 feet; initial production 50 bbls.; total depth 1,127 feet. F. P. Cullum's No. 1 Falls County School Lands, dry and abandoned 1,151 feet. F. P. Cullum's No. 8 Falls County School Lands, top pay 1,125 feet; initial production 19 bbls.; total depth 1,142 feet. F. P. Cullum's No. 1 Logan, dry and abandoned; total depth 1,302 feet. H. H. Frazier and others' No. 1 King, location abandoned. P. F. Gwynn's No. 1 Jenkins, dry and abandoned; total depth 1,261 feet. Nicholson and others' No. 1 Hudson, dry and abandoned; total depth 740 feet. George L. Pace's No. 1 Green, top pay 1,190 feet; initial production 118 bbls.; total depth 1,207 feet. Perkins & Cullum's No. 2 Hansen, top pay 1,114 feet, initial production 50 bbls.; total depth 1,137 feet. Pois and Schultz' No. 2 Green, top pay 1,121 feet; initial production 58 bbls.; total depth 1,141 feet.

Cooke County

Danciger Oil & Refining Co.'s No. 2 Fleitman, top pay 931 feet and 950 feet; initial production 18 bbls. of oil and 72 bbls. of water; total depth 954 feet.

Wise County

Hodges Luke and others' No. 1 Womack, dry and abandoned; total depth 1,830 feet. Arkansas Fuel Oil Co.'s No. 45 Kemp & Kempner, top pay 1,768 feet; initial production 65 bbls.; total depth 1,771 feet. Clark and others' No. 6 Bickley, top pay 846 feet; initial production 135 bbls.; total depth 858 feet. Pyle and others' No. 1 Overby, top pay 1,248 feet; initial production 65 bbls.; total depth 1,251 feet. Giles & Sewell's No. 1 Smith, dry and abandoned; total depth 1,754 feet.

Young County

Campbell Oil Corp.'s No. 1 Hawkins, dry and abandoned; total depth 1,312 feet. W. R. Duke and others' No. 1 Brown, dry and abandoned; total depth 1,003 feet. F. P. Hynes' No. 1 Husted, dry and abandoned; total depth 1,852 feet. Independent Oil & Gas Co.'s No. 16 Larimore, top pay 692 feet; initial production 450 bbls.; total depth 713 feet. Kliner & Riggs' No. 2 Larimore, top pay 699 feet; initial production 150 bbls.; total depth 709 feet. Panhandle Refining Co.'s No. 3 Larimore and others, top pay 697 feet; initial production 192 bbls.; total depth 707 feet. Willis & Terrell's No. 1 Kirkland, dry and abandoned; total depth 760 feet. Fred Barron's No. 1 Kisinger, top pay 2,538 feet; shot 70 quarts from 2,552-87 feet; initial production 159 bbls.; total depth 2,587 feet. Bryson Oil & Gas Co.'s No. 1 Johnson, dry and abandoned; total depth 4,100 feet. Connor Sons & Cloughly's No. 3 Ford, top pay 2,605 feet; initial production 50 bbls.; total depth 2,615 feet. Independent Oil & Gas Co.'s No. 1 Gilmore, top pay 2,436 feet; plugged back to 2,470 feet; shot 30 quarts from 2,436-66 feet; initial production 20 bbls.; total depth 2,635 feet. Kay and others' No. 1 Ragland, dry and abandoned; total depth 3,830 feet. Nash & Windfohr's No. 1 Graham, top pay 2,677 feet; initial production 100 bbls. in 24 hours; total depth 2,688 feet. Panhandle Oil & Refining Co.'s No. 1 Morrison, dry and abandoned; total depth 4,885 feet. T. B. Slick's No. 1 Graham, top pay 3,750 feet; initial production 13 bbls.; total depth 3,840 feet.

RANGER DISTRICT COMPLETIONS
Week ending August 2

Coleman County

F. A. Lane's No. 1 Rich, dry and abandoned; total depth 537 feet. Sterling Oil & Gas Co.'s No. 1 Cox, abandoned, location. Lloyd Oil Corp.'s No. 14 Bartholomew, top pay 1,450 feet; initial production 125 bbls.; total depth 1,456 feet.

Comanche County

Lone Star Gas Co.'s No. 2 Frost, top pay 2,742 feet; total depth 3,010 feet; plugged back to 2,800 feet; shot 120 quarts from 2,742-94 feet; initial production 1,450,000 feet of gas.

Eastland County

Southern Oil & Production Co.'s No. 1 Summerall, gas sand 1,790-1,876 feet; initial production 5,050,000 feet of gas. Lone Star Gas Co.'s No. 7 Grove, top pay 3,545-51 feet; initial production 62,400,000 feet of gas. C. M. Root's No. 1 Wilson, top pay 3,820 feet; shot 180 quarts 3,775-3,859 feet; initial production 35 bbls.; total depth 3,859 feet.

Hood County

Hood Oil & Gas Co.'s No. 1 Dobney, dry and abandoned; total depth 4,275 feet.

Palo Pinto County

Nelson Oil Syndicate's No. 1 Owens, initial production 1,500,000 feet of gas from sand 3,568-78 feet; total depth 3,580 feet. L. W. Winklen's No. 1 Bridges, top pay 1,507-15 feet; initial production 5 bbls. oil and 250,000 feet of gas; total depth 1,758 feet.

Shackelford County

Harris and others' No. 1 Parrish, top pay 2,124 feet; initial production 72 bbls.; total depth 2,128 feet. Skelly Oil Co.'s No. 6-B Mathews, top pay 1,112 feet; initial production 36 bbls.; total depth 1,120 feet. The Texas Company's No. 1 Mathews, top pay 963 feet; total depth 1,190 feet; plugged back to 973 feet; shot 10 quarts; initial production 5 bbls.

Stephens County

Republic Production Co.'s No. 8 Knox, total depth 4,613 feet; plugged back to 4,028 feet; shot 100 quarts 3,970-4,020 feet; initial production 15 bbls.

Throckmorton County

C. P. Burton's No. 1-A Portwood, dry and abandoned; total depth 1,460 feet.

NORTH TEXAS PRODUCTION
Week ending August 2

Panhandle District—	Bbls.
Carson County	8,730
Hutchinson County	21,240
Gray County	65,405
Moore County	315
Potter County	10
Wheeler County	746
Total this week	96,546
Total last week	96,009
Increase	537
Wichita Falls District—	
Archer County	16,915
Baylor County	1,040
Clay County	744
Cooke County	3,360
Foard County	150
Jack County	2,425
Haskell County	60
Montague County	6,546
Throckmorton County	780
Wilbarger County	23,415
Wichita County	24,405
Young County	15,490
Total this week	95,315
Total last week	95,617
Decrease	302
Ranger District—	
Brown County	6,092
Callahan County	3,125
Coleman County	2,950
Comanche County	1,237
Palo Pinto County	564
Eastland County	4,445
Shackelford County	6,945
Stephens County	5,350
Total this week	30,653
Total last week	30,680
Decrease	27

PANHANDLE COMPLETIONS
Week ending August 2

Carson County

Empire Gas & Fuel Co.'s No. 25 Burnett, initial production 11,500,000 feet of gas at 2,450-2,697 feet; total depth 2,710 feet.

Gray County

Reynolds and others' No. 1 Webb, initial production 3,500,000 feet of gas at 2,189-2,265 feet; total depth 2,550 feet. Humble Oil & Refining Co.'s No. 5 Combs & Worley, top pay 2,833-75 feet; initial production 655 bbls.; total depth 2,875 feet. Phillips Petroleum Co.'s No. 5 Wright (Wood), top pay 2,861 feet; initial production 1,000 bbls.; total depth 2,875 feet. Prairie Oil & Gas Co. and others' No. 4 Worley and others, total depth 2,893 feet; plugged back to 2,885

(Continued on Page 114)

WILDCAT OPERATIONS IN TEXAS PANHANDLE
Week Ending August 4

CARSON COUNTY

Company, well, farm name, section and block—	Remarks—
Danciger O. & R. Co.'s No. 1 Block, 330 ft. N and E lines, Sec. 112, Blk. 4, I.&G.N. Sur.	S.D. 3,024 ft; T.P. 3,021 ft; I.P. 30 bbls. oil daily.
Empire G. & F. Co.'s No. 1 Archer-B, 330 ft. N and E, SW cor. SW, Sec. 139, Blk. 3, I.&G.N.R.R. Sur.	Location.
Gibson Oil Corp.'s No. 1 Moore, 990 ft. N, 330 ft. E, N½ SE, Sec. 20, Blk. 7, I.&G.N. Sur.	Drlg. 2,925 ft.
North American Oil Co.'s No. 1 Burnett, C NW, Sec. 97, Blk. 4, I.&G.N. Sur.	Rig on ground.
North American Oil Co.'s No. 1 Burnett, C SE, Sec. 98, Blk. 4, I.&G.N. Sur.	Location.
Reiger & Steckoll's No. 1 Martin, 330 ft. N and W, SW, Sec. 90, Blk. 7, I.&G.N. Sur.	12,000,000 ft. gas 2,815-2,910 ft; S.D. 2,950 ft.
Shamrock O. & G. Co.'s No. 1 Thompson, 330 ft. S and W lines, E 80 ac., NE, Sec. 5, Blk. 7, I.&G.N. Sur.	17,000,000 ft. gas 2,755 ft; S.D. 3,404 ft; T.P. 3,171 ft; swbd. 16 bbls. on test; shot 100 qts. 3,180-3,280 ft; C.O.
Sulock Oil Co.'s No. 1 Bost, 990 ft. S, 330 ft. E, SW, Sec. 1, Blk. S.&F.	S.D. 3,240 ft; to plug back for gas.
Sweeney et al's No. 1 Locke, 164 ft. N and W, 40-ac. tr. along R.R. in Sec. 57, Blk. 7, I.&G.N. Sur.	S.D. 1,000 ft.
Texas Interstate P. L. Co.'s No. 1 Burnett, 1,320 ft. N, 660 ft. W, of W 480 ac., Sec. 99, Blk. 5, I.&G.N. Sur.	S.D. 2,621 ft.
Texas Interstate P. L. Co.'s No. 1 Burnett, C SW, Sec. 6, Blk. 5, B.&B. Sur.	Rigging up.
Texas Interstate P. L. Co.'s No. 2 Burnett, C NE, Sec. 77, Blk. 5, I.&G.N. Sur.	Setting 8-in. csg. 2,263 ft.

CHILDRESS COUNTY

C. L. Sloane et al's No. 1 B. P. Smith, Sec. 49, F. P. Knott lands	T.D. 5,000 ft.

COLLINGSWORTH COUNTY

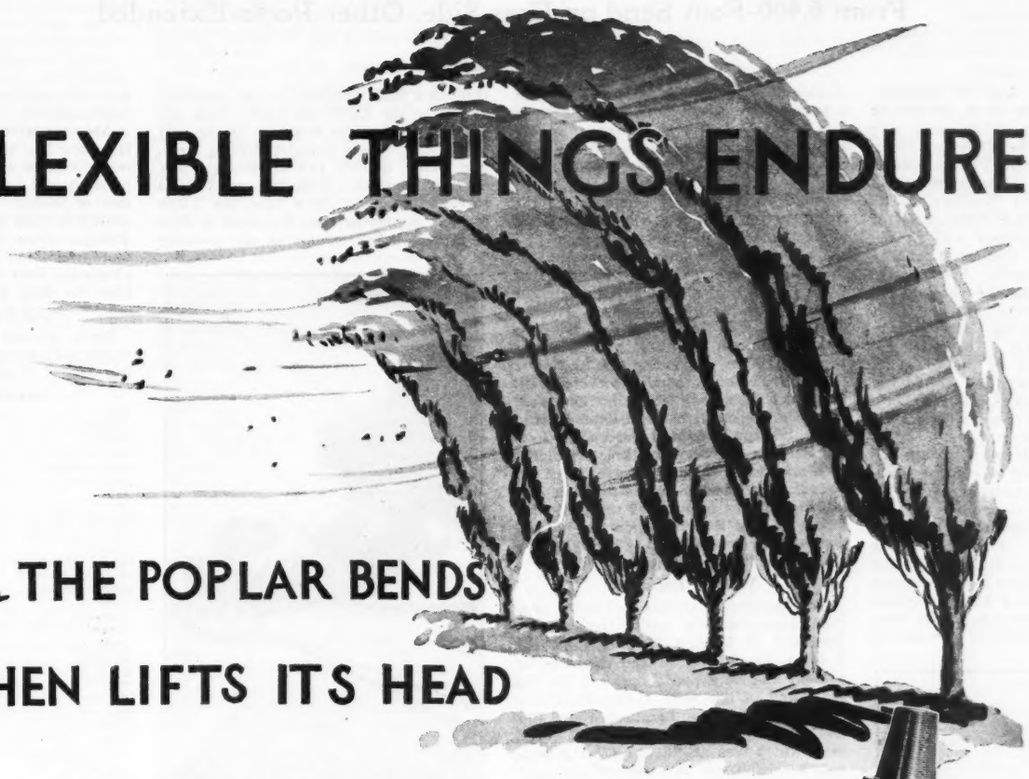
Shoupe Bros.' No. 1 Aldus, 410 ft. N, 330 ft. E, Sec. 96, Blk. 16, H.&G.N.R.R. Sur.	Show oil and gas 1,678 ft; T.D. 3,046 ft; crooked hole.
Shoupe Bros.' No. 1 Whitson, 330 ft. N and E, SW, Sec. 33, Blk. 12, H.&G.N.R.R. Sur.	Rig.

DONLEY COUNTY

Blue Bonnett Oil Co.'s No. 1 Ball, 1,075 ft. N line, 985 ft. E line, Sec. 22, Blk. E, D.&P.R.R. Sur.	T.D. 3,006 ft; contract depth.
Marine Oil Co.'s No. 1 Sawyer, C SW, Sec. 5, Blk. G, G.C.&S.F. Sur.	S.D. 4,025 ft.

(Continued on Page 116)

FLEXIBLE THINGS ENDURE



. . . THE POPLAR BENDS

THEN LIFTS ITS HEAD

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IN some winds a poplar tree sweeps close to the ground with its topmost branches, but when the wind has passed it returns to its graceful upright position without an ill effect.

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GUIBERSON

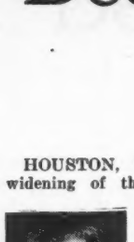
BETTER BE SAFE THAN SORRY

Deep Sand Area Extended at Refugio

Drilling More Active as Result of Completion of Well From 6,400-Foot Sand on East Side. Other Pools Extended

By Neil Williams
Staff Correspondent, Gulf Coast Fields

HOUSTON, Tex., Aug. 4.—Further widening of the deep sand producing areas on the east side of the Refugio Field, additional extensions of the Hankamer and Bayou Bouillon Fields and the bringing in of the second well in the new area west of the Lockport Field were among the chief developments on the Gulf Coast the past week. At Refugio, Houston Oil Co.'s No. 1 Strauch, wild burning gas well in the townsite, was shot out Saturday and the dying pressure and volume gave indication late in the week that the gasser's long rampage soon would be over.



This well, which blew out June 25 and which has been out of control since, caught fire Sunday morning, July 27. Except for two short intervals when the well snuffed itself out only to burst out anew, it has been burning steadily all week. This time operators believe the blaze out for good. Two 6-inch streams of water pumped from a nearby stream, augmented by city hose lines, have been kept played on the walls of the crater,

Houston Oil Co.'s No. 1 Strauch, burning at Refugio.

and a hazard to property, but with the exception of a few small buildings there was no loss on this score, as most of the buildings were dragged away from the which are thought sufficiently cool not to ignite the gas again. The gas flow has shown a very decided weakening and it is thought the hole is partly bridged and may soon choke off the flow entirely.

Located in Block 20, inside the city of Refugio, the well created a sensation gasser either before the well caught fire or immediately afterwards. However, the well, which has made a deep crater, 125 feet across, in the town block, is a complete loss and its uncontrolled drainage of a vast amount of gas volume and pressure over a period of five weeks has had and will have a very noticeable effect on the life of the remainder of the field.

Drilling Still Active

Except for a few wells, the burning gasser has not resulted in any cessation of active drilling development which has been going on in the deep sands on the east side of the Refugio Field, of which development the No. 1 Strauch gasser is a part. To the contrary, the past week was marked by several important extensions and additional proving of the deep producing horizons. These developments have revived a little more interest in the possibilities of the deep sands, which for several weeks have not yielded anything of particularly favorable mention.

Chief among the new developments was the completion of Independent Oil & Gas Co.'s No. 1 Shelly, which, although not a large well, tended to indicate a trend of production in the lowest, or 6,400-foot, sand. The well, originally a west offset test to Union Producing Co.'s No. 1 O'Brien, 5,500-foot sand discovery well, but which tested salt water in that sand, has been deepened to the 6,400-foot sand to a total depth of 6,446 feet and is flowing 150 bbls. daily on two three-sixteenths inch chokes with a pressure of 2,200 pounds. With decline in gas pressure permitting further opening of the well it is likely a very material increase in production will be made as has been the case with other Refugio wells.

Well Is Important

The importance of this well is its location approximately 2,000 feet to the northeast of Mission Drilling Co.'s No. 1 Moss, Block 110, of the townsite, at present the only producing well in this sand, and in line with Union Producing Co.'s No. 1-A Rose Lambert, the 6,400-foot sand discovery well, 4,000 feet northeast, which was abandoned after flowing only a short time. In territory surrounded by 5,500-foot wells, it proves up the continuation of the 6,400-foot horizon under the 5,500-foot producing area, to which level the 5,500-foot sand wells can be deepened when necessary.

Further extension of this sand is seen in Independent Oil & Gas Co.'s No. 6 Jerry Reilly, approximately 3,500 feet northwestward in the heart of the old 3,700-foot producing area. This well late in the week was coring in sandy shale showing oil at 6,398 feet, which is running considerably higher than the deep wells on the east side of the field. A well in this hole would prove up the sand through a large territory, so far undrilled except to the 3,700-foot sand. This territory underlies the townsite of the city of Refugio, whose townlot drilling orgy, just ended, quickly ran up Refugio production from the 3,700-foot sand to a threatening point. Now that the 3,700-foot oil is playing out, discovery of deep oil at the western edge of the townsite

Another view of crater and burning gas well at Refugio.

probably would set operators to deepening all these 3,700-foot wells, moving eastward to meet the deep development encroaching into the townsite from the east.

Mission Drilling Co.'s No. 1 Joe Shay late in the week indicated an extension of the 5,500-foot sand production another city block westward. It is in oil sand at 5,462-69 feet and at latest report was cleaning itself through two quarter-inch chokes.

Also of interest at Refugio is Saxet Oil Co.'s No. 12 Clint Heard on the far south side of the Refugio Field, which, in sand and lime at 5,492 feet, has cemented casing. This is some 8,000 feet southwestward along the south ridge of Refugio from the present 5,400-5,500 foot production and in an old 3,700-foot producing area but an entirely new district for deep drilling.

Gulf Coast Production

Daily average production of the pools in the Gulf Coast area for the week ending August 2 follows:

SOUTHEAST TEXAS

Allen	51
Barbers Hill	17,944
Batson	1,088
Big Creek	4,122
Blue Ridge	1,520
Brenham	180
Boling	1,169
Clay Creek	1,455
Damon Mound	670
DeWalt	11,987
Fannett	883
Goose Creek	4,663
Hankamer	2,632
High Island	818
Hull	8,144
Humble	19,582
Jasper County	20
Lost Lake	402
Markham	331
Moss Bluff	42
Nash	310
North Dayton	1,453
Orange	2,098
Orchard	2,040
Pierce Junction	12,555
Port Neches	2,228
Raccoon Bend	12,021
Refugio	33,921
Esperson (Sheeks)	2,346
Saratoga	1,161
Sour Lake	2,258
South Liberty	3,871
Spindletop	17,213
West Columbia	5,684
Total Southeast Texas	176,782
Week ending July 26	177,663
Decrease	881

SOUTH LOUISIANA

Anse La Butte	32
Bayou Blue	197
Bayou Bouillon	114
Black Bayou	535
Edgerly	545
Jennings	2,239
Hackberry	3,361
Lake Barre	1,389
Lake Pelto	141
Lockport	3,019
Port Barre	4,489
Sorrento	85
Starks	634
Sulphur	4,050
Sweet Lake	105
Vinton	5,927
Welsh	130
White Castle	1,212
Total South Louisiana	28,204
Week ending July 26	26,255
Increase	1,949
Total Gulf Coast	204,986
Week ending July 26	203,918
Increase	1,068

Bayou Bouillon

At Bayou Bouillon, St. Martin Parish, Louisiana, Rycade Oil Corp. brought in its No. 10 Bouillon fee, which extends the field approximately 500 feet to the northwest. The well flowed 225 bbls. in the first nine hours but in the second day increased its production to 826 bbls., this being through a five-eighths inch choke. The well is in a sand at a total depth of 4,307 feet. Bayou Bouillon is owned jointly by Rycade Oil Corp. and Humble Oil & Refining Co. and development is being carried on on a conservative basis.

The Hankamer Field, another of the Gulf Coast's newer producing districts, gave further indication of its importance as an oil reserve with the completion by Gulf Production Co. of its No. 8 Boyt, the eighth well brought in at that field. This

(Continued on Page 76)

GULF COAST FIELDS AND WILDCATS

Week Ended August 2

BARBERS HILL—CHAMBERS COUNTY

Mills Bennett Production Co.'s No. 10 Barrow, southwest	Total depth 4,673 ft.; reaming.
Mills Bennett Production Co.'s No. 3 E. W. Barber, north	Total depth 3,242 ft.; 10-inch casing stuck.
Mills Bennett Prod. Co.'s No. 1 Henry Fisher, southwest	Drlg. hard lime rock 4,162 ft.
Mills Bennett Prod. Co.'s No. 4 Gulf-Higgins, southeast	Drlg. gumbo and shale 3,466 ft.
Humble Oil & Ref. Co.'s No. 6 fee, west	Total depth 5,331 ft.; drill stem stuck.
Humble Oil & Ref. Co.'s No. 7 Mayers fee, west	Standing.
Humphreys Corp.'s No. 1 Fitzgerald, north	Drlg. sand and shale 1,624 ft.
Humphreys Corp.'s No. 1-B Barber, north	Drlg. lime rock 1,748 ft.
Humphreys Corp.'s No. 9-A Kirby, northwest	Drlg. shale and lime 3,613 ft.
Humphreys Corp.'s No. 6-A Barber, northwest	Drlg. shale and lime 3,289 ft.
Humphreys Corp.'s No. 8-B Kirby, northwest	Cemented surface casing 1,378 ft.
Humphreys Corp.'s No. 2 Scott	To pump 7,296 ft.
Humphreys Corp.'s No. 2-H Kirby (workover)	Washing 6,600 ft.
McAlbert Oil Co.'s No. 7 Woodward	Pulling screen to deepen 5,465 ft.
Republic Production Co.'s No. 3 Kirby (workover)	Rig up to work over; total depth 5,335 ft.
Rio Bravo Oil Co.'s No. 1 Fisher, southwest	Drlg. gumbo 2,057 ft.
Sinclair Oil & Gas Co.'s No. 3 McKinney fee	Total depth 6,597 ft.; sidetracking 5,060 ft.
Sinclair Oil & Gas Co.'s No. 5 McKinney fee, southeast	Drlg. shale 3,824 ft.
Sun Oil Co.'s No. 1 Wilburn fee, southeast	Cemented casing 5,079 ft.
Sun Oil Co.'s No. 8 Wilburn fee, southeast	Drlg. lime rock 4,889 ft.
Sun Oil Co.'s No. 8 J. Wilburn, southeast	Drlg. sandy shale 5,062 ft.
Sun Oil Co.'s No. 9 J. Wilburn, southeast	Drlg. sand showing oil 4,719 ft.
Sun Oil Co.'s No. 6 Chambers, south	Drlg. sand 3,401 ft.
Sun Oil Co.'s No. 1 Zadie Fisher, southwest	Location.
Sun Oil Co.'s No. 1 O. K. Winfree, west	Drlg. cap rock 4,751 ft.
The Texas Company's No. 4 Wilburn, southeast	Total depth 5,149 ft.; to pump.
The Texas Company's No. 1 Williams, southwest	Rig.
Yount Lee Oil Co.'s No. 1 Hindman, southwest	Rig.
Yount Lee Oil Co.'s No. 15 Chambers, south	Drlg. hard sand 902 ft.
Yount Lee Oil Co.'s No. 4 Phillips, southeast	Cementing casing 5,110 ft.
Yount Lee Oil Co.'s No. 8 Woodward, southeast	Drlg. shale and lime 4,425 ft.

RACCOON BEND—AUSTIN COUNTY

Humble Oil & Ref. Co.'s No. 9 Thompson	Derrick.
Humble Oil & Ref. Co.'s No. 10 Thompson	Drlg. shale 884 ft.
Humble & Valley's No. 3 Buchanan	Derrick.

(Continued on Page 126)

OKLAHOMA FIELDS

(Continued from Page 42)

in this area. Township 24-3w is the center of the play which extends a half township north into Township 25-3w, Grant County, and about the same distance south into Township 23-3w, Garfield County. Core drills have been at work in this area for some time and it is believed the acreage play resulted from the findings disclosed by the core drills.

A failure was completed in the Orlando area. Minnehoma Oil Co.'s No. 1 Shadell, NE cor. SE NE, Section 7-19-1w, found water in the Wilcox sand at a total depth of 5,089 feet, where the water rose 4,000 feet overnight. It may be abandoned.

Prairie Oil & Gas Co. and others' No. 1 Finnell, SW cor. SE, Section 5-19-1w, has corrected the depth and has landed 6-inch casing at 4,847 feet. The top of the Viola lime is at 4,745 feet. A showing of oil was found at 4,869-73 feet, and it was drilling at 4,944 feet in Simpson sand with 1,000 feet of water in the hole.

The second test in the southeastern part of Garfield County, being drilled by the Continental Oil Co., is believed to be running lower on structure than the discovery well. The test is No. 1 Meisner, SE cor. SW NW, Section 10-20-4w, and was drilling at 5,615 feet in Chattanooga shale. The top of the shale was found at 5,594 feet.

The wildcat test east of the St. Louis Pool found water in the Wilcox sand and may be plugged back to the Simpson sand. Pure Oil Co. and others' No. 1 Ashby, SE cor. NE, Section 22-7-5, Seminole County, about 2 miles east of the St. Louis Pool, found water at 4,209-22 feet, where it rose 3,000 feet in the hole. The showing of oil was found at 4,152-90 feet. It was drilling deeper at 4,264 feet. It is the first test to find oil in the area where a number of dry holes have been completed.

New Potentials Announced

The new potentials for August in the different pools in the Seminole area that are on the decline curve according to State Umpire Ray Collins are as follows:

Pool—	Potential	Daily allowed
Allen (shallow)	18,841	9,491
Carr City	10,819	5,436
Bowlegs	29,203	14,793
Old Earlsboro	29,552	15,304
Little River	47,956	24,363
Maud	5,889	3,288
Mission	15,127	7,678
Searight	13,613	6,978
East Seminole	4,273	2,288
Seminole	29,351	15,018
St. Louis	40,177	21,723

Dixie Oil Co. and others' No. 1 Higbee, C SW NE, Section 20-6-1, a wildcat in southern Cleveland County, was believed to be making salt water after it had a showing of oil. It was bailed down to the 4,500-foot level and the operators expressed the opinion the hole was bridged at the 5,800-foot level. The test was shut down for several days awaiting the arrival of 3-inch drill pipe which will be used to clear the bridge. The water found standing in the hole is believed to be coming from the lower formations. After clearing out the bridge an attempt will be made to cement off the water. Some express the opinion the showing of oil has not diminished since the bailing got under way.

Southern Oklahoma

The Tatums area in Carter County is kept busy by the new extension well. One well was completed as a producer in the last week and two others are nearing the sand and may be producing in a few days. Wirt Franklin Petroleum Corp.'s No. 1 Hook, NW cor. NE, Section 24-1s-3w, Carter County, on the northeast edge of the district, flowed and swabbed 546 bbls. in 24 hours. The production is coming from a series of sands at 2,056-2,149 feet and 2,155-58 feet. The same operators' No. 1 Mitchell, NW cor. SE, Section 24-1s-3w, the offset to the discovery well, that extended production in the area, has sand at 2,320-32 feet. The test is expected to be drilled to the 2,500-foot level before cementing the casing. Trevelyn Oil Co.'s No. 2 Mitchell, NW cor. SW SE, Section 24-1s-3w, has cemented casing on top of an oil sand at 2,274 feet.

Another gas well was completed in the Cement Pool in Caddo County. The new well is on the north side of the field and many express the opinion the deep sand may be productive over a larger area than was at first believed. Magnolia Petroleum Co.'s No. 3 Cement-Edwards, SE cor. SW, Section 25-6-10w, gauged 18,000,000 feet of gas from sand at 3,390-3,404 feet.

Mid-Kansas Oil & Gas Co.'s No. 9 Wade, SW cor. SE SW, Section 2-5-9w, the extension well on the east side of the Cement Pool, is still cleaning out and swabbing. The well made 318 bbls. of oil on a recent swabbing test in 24 hours.

Oklahoma City's Shut-In Production

The initial production of the shut-in wells in the Oklahoma City Pool that have been allowed to produce for 24 hours or less as of August 2, and are now shut in for the proration period, was 712,466 bbls. The initial production and the approximate dates each well will be opened for its regular producing period follows:

I. T. I. O.:			
Sudik	*1	[1]30,000	.....
Salsman	*4	[20]225	8-14-30
M. Fuzzell	3	6,301	8-21-30
G. Button	5	[19]000	8-21-30
Trosper Park	*6	[15]060	8-21-30
E. Trosper	*1	[16]271	8-20-30
Jones	*10	[12]604	8-19-30
L. Farley	4	7,395	8-18-30
Mary Sudik	*4	16,199	8-27-30
Canfield Button	3	[6]494	8-26-30
School Land	*2	[16]482	8-27-30
School Land	*1	84,734	8-27-30
School Land	*3	[10]7,734	9- 2-30
S. Peterson	*2	[7]6,327	9- 2-30
A. Brokaw	*3	2,855	9- 1-30
C. Trosper	*2	[20]2,385	9- 1-30
Johnson	*5	2,406	8-31-30
Farley	*1	6,408	8-30-30
Mary Sudik	*7	[25]169	9- 3-30
Rensimer	*1	[21]930	9-14-30
M. Sudik	*8	[18]916	9-14-30
H. G. Trosper	*1	[17]595	9-14-30
S. Peterson	*2	[10]7.591	9-12-30
E. Trosper	*2	[12]185	9-12-30
Theimer	*5	[25]562	9-12-30
Spillman	*1	[14]4,937	9-26-30
Holmes Gray	*1	[14]173	9-26-30
N. Emerson	6	[26]113	9-25-30
Carrico	*1	[17]517	9-27-30
N. Emerson	11	[29]699	9-27-30
Jones	*13	[5]6,866	9-28-30
W. J. Phillip	*1	[30]7,586	9-29-30
Jones	*14	[12]562	9-31-30
Corff	*1	[4]917	10- 3-30
Habegger	*1	[4]3,296	10- 4-30
Peterson	*5	[18]3,755	10- 5-30
Phillips	*1	[24]7,586	10- 5-30
Carrio	*1	9,744	10- 4-30
Coppenger	*1	[17]6,175	10- 5-30
Wattera	*5	[21]1,544	10- 5-30
M.-K.-T.	*1	[10]3,264	10- 6-30
H. G. Trosper	*3	[17]4,462	10- 6-30
W. Franklin:			
Lowery	*8	[10]0,000	8-20-30
Wright	*1	5,805	8-27-30
Theimer	*8	[20]0,000	9-29-30
Holder	*1	[3]0,000	10- 6-30
Page	*1	[32]911	10- 2-30
Cromwell:			
Trosper Park	*15	5,240	8-13-30
Trosper Park	*6	11,921	8-30-30
Trosper Park	*20	[8]8,726	9-22-30
Trosper Park	*23	[36]0,070	9-22-30
Trosper Park	*24	[30]3,008	9-23-30
Sinclair:			
School Land 54	*3	4,420	8-13-30
School Land	*4	9,050	8-14-30
Farley Fuzzell	2	10,865	9- 4-30
Kinter	10	115	8- 4-30
Vincl	*5	[15]0,730	8-14-30
Vincl	*8	[3]0,720	8-14-30
School Land 67	*2	6,770	8-14-30
School Land 54	7	[8]0,000	8-30-30
Vincl	*11	31,290	8-30-30
School Land 54	*13	7,150	8-20-30
School Land 54	*10	17,220	8-30-30
School Land 67	*3	15,940	8-29-30
School Land 54	*16	[28]8,145	9- 1-30
Vincl	*9	[7]0,075	9- 2-30
School Land 54	*6	[12]0.000	9-14-30
Vincl	*14	[32]2,225	9-13-30
Vincl	*16	37,905	9-13-30
Donnell	*1	3,060	9-13-30
School Land 69	*.	[12]0,570	9- 2-30
School Land 54	*16	15,545	9- 4-30
Vincl	*6	[22]0,500	10- 1-30
Coline:			
Olds	*11	[11]1,284	8-15-30
Clauer	6	5,596	8-28-30
Olds	*7	[21]1,763	8-28-30
Clauer	*10	4,496	9- 1-30
Clauer	*9	11,948	9-24-30
Warren	7	8,826	9-25-30
Slick:			
Dunivan	*1	[13]3,482	8-15-30
Hoopes	*8	798	8-14-30
Carter	*1	[9]8,891	8-16-30
Townsend	*1	[4]4,798	8-16-30
Classen	*1	[21]1,711	8-29-30
Foote	*1	[10]0,000	8-27-30
G. Milner	*1	[09]924	9-14-30
Storie	*1	8,636	9- 3-30
Crawford	*1	[13]8,962	9-23-30
Baker	*4	[19]4,681	9-21-30
Baker	*1	[8]1,428	10- 5-30
Heenan & Co.:			
Cunningham	*2	[12]2,000	8-11-30
Mid-Texas:			
Hiddleston	*1	2,320	10- 2-30
Tom Slick Oil Co.:			
Milner	2	[27]7,723	10- 2-30
Hall & Briscoe:			
Holmes	*1	[9]9,743	7-31-30
Prairie:			
Hiddleston	9	[19]4,310	8-20-30
Jack Shaffer et al:			
Jones Community	1	2.345	8-21-30
Hall & Briscoe:			
Lindsay	2	[27]944	9- 1-30
Wrightsmith Oil Co.:			
Smith	*1	[5]5,312	9- 2-30
Phillips Pet. Co.:			
Traders Comprio	*1	4,055	9-25-30
Jones Community	*1	[14]800	10- 6-30
Total	102	712,466	

*Wells producing from the Simpson sand. All others are producing from the Arbuckle lime.

[1]Estimated. [2]Thirteen hours. [3]Nine hours, 30 minutes. [4]Twelve hours. [5]Five hours. [6]Eighteen hours. [7]Sixteen, one-half hours. [8]Seventeen hours. [9]Nineteen hours, 45 minutes. [10]Sixteen hours. [11]One hour, 15 minutes. [12]Thirteen hours, 55 minutes. [13]Eleven and one-half hours. [14]Fifteen hours. [15]Twenty-one and one-half hours. [16]Nineteen hours. [17]Fifteen and three-quarter hours. [18]Eighteen and one-half hours. [19]Six hours. [20]Fifteen hours, 40 minutes. [21]Ten and one-quarter hours. [22]Four hours. [23]Eight hours. [24]Eleven hours, 10 minutes. [25]Seventeen hours, 30 minutes. [26]Fourteen and one-half hours. [27]Ten hours, 15 minutes. [28]Twenty-one hours. [29]Two and one-third hours.

These notations indicate the number of hours and wells produced on their initial production test.

Greater Seminole Production

Greater Seminole production shows another decline of approximately 45,000 bbls. a day for the week ending July 28. The decline is part of the program to bring the State's production down to the 550,000 bbls. a day. The Seminole area averaged 134,910 bbls. from 1,887 wells. The daily average gauges from the different pools in the Greater Seminole area were as follows:

Pool—	Wells	Bbls.
Little River	372	25,953
East Little River	84	10,246
Carr City	58	6,279
Maud	138	3,252
Mission	102	7,269
Bowlegs	280	13,798
Earlsboro	290	18,959
South Earlsboro	25	9.769
East Earlsboro	155	14,489
Seminole	266	14,973
East Seminole	33	2,002
Searight	84	7,921
Allen	269	15,069
Asher	26	1,065
West Asher	14	3,997
Konawa	92	21,270
St. Louis	486	24,153
Sasakwa	53	5,444
Total	2,827	205,908

Seminole Oil Shipments

Pipe line companies again reduced oil shipments from the Greater Seminole area approximately 38,000 bbls. a day for the week ending July 28. The daily average shipments by companies and tank car deliveries were as follows:

Company—	Seminole bbls.	Asher, Pearson, St. Louis bbls.	Konawa bbls.
Barnsdall	2,410	.....	.....
Champlin	4,526	.....	432
Continental	348	.....	.....
Consolidated	..	1,013	.....
Cosden	9,548	100	6,321
Deep Rock	3,275	621	.....
Empire	3,764	.....	.....
Gulf	13,191	2,229	.....
Independent	.....	1,374	.....
Magnolia	8,567	5,894	.....
Oklahoma	22,077	.....	450
Prairie	12,192	3,989	3,549
Prod. & Refiners	1,610	.....	.....
Pure	5,339	.....	.....
Shell	5,488	409	2,204
Sinclair	25,510	7,087	7,327
Texas	9,314	2,059	1,902
Tidal	8,242	3,476	..
White Oak	1,500	.....	.....
Total	136,902	28,246	22,777
Tank cars	4,106	.....	.....
Grand total	141.008	.....	.....

Oklahoma City Shipments

The shipments of oil by tank car and pipe line from the Oklahoma City Pool, show an increase of approximately 57,000 bbls. a day. The increase is due to the pool going back on its regular producing schedule July 25. The daily average shipments were as follows:

Company—	Total shipments	Daily average
Empire	137,587	19,655
I.T.I.O.	35,159	5.023
Magnolia	60,307	8,615
Oklahoma	104,040	14,863
Prairie	92,058	13,151
Shell	none	.....
Sinclair	225,518	32,217
Tidal	12,514	1,788
Total	667,183	95.312

Beckham County

McFann & Price made location for No. 1 Webster, C SW SW, Section 34-8-25w.

Caddo County

Magnolia Petroleum Co.'s No. 8 Niles, SW cor. NW NW, Section 36-6-10w, is rigging up. No. 3 C. Edwards, SE cor. SW, Section 25-6-10w, has been completed for 18,000,000 feet of gas in sands 3,389-94 feet and 3-396-3,407 feet.

Comanche County

Crane & Aikens' No. 1 Adkins, NE cor. SE, Section 14-1-9w, is a rig.

Creek County

Dixie Drilling Co. and others' rig is up for No. 1 Bruce, NW cor. SW NE SE, Section 10-17-9. Bryan Petroleum Co.'s No. 2 Ta-Co-Nay, SE cor. NW SW, Section 3-17-10, is rigging up. Magnolia Petroleum Co.'s No. 6 Emarthla, NE cor. SE SW, Section 5-16-8, is rigging up. C. G. Tibbins Oil & Gas Co.'s No. 1 White, SE cor. NW, Section 6-14-9, and No. 4 Sneed, SW cor. SE NW, Section 18-14-9, is rigging up. Sells & Matych's No. 1-A Bough, NW cor. SE NE, Section 22-19-9, is dry and abandoned at 2,697 feet. Transcontinental Oil Co.'s No. 2 Cubbie, SE cor. SW SW, Section 19-17-8, has been completed for 30,000,000 feet of gas in sand at 1,505-33 feet after plugging back from 3,670 feet in Wilcox sand. Bryan Petroleum Co.'s No. 1 Ta-Co-Nay, SW cor. NW SW, section 3-17-10, has been completed for 250,000 feet of gas in sand at 1,084-1,102 feet. A. B. Ice Oil Co.'s No. 11 Fulsom, CNL SW SW, Section 13-17-10, has been completed for 6 bbls. in sand at 1,885-1,917 feet. Shaw-Mut Oil & Gas Co.'s No. 1 Self, SE cor. NE, Section 30-17-10, has been completed for 2,000,000 feet of gas in sand at 2,105-29 feet. Ed Jilson and Steene's No. 1 Self, SE cor. NW, Section 31-17-10, has been completed for 20 bbls. in sand at 2,729-37 feet after plugging back from the Wilcox sand at 3,111 feet. C. G. Tibbins Oil & Gas Co.'s No. 3 Sneed, SW cor. NE NW, Section 18-14-9, made 40 bbls. in sand at 2,278-2,333 feet. Glen Cole and others' No. 1 Withers, SE cor. NE SE, Section 1-14-10, has been abandoned at 3,139 feet.

Grady County

Clyde Kahl made location for No. 1 White, SE cor. SW, Section 30-4-7w.

Greer County

H. A. French and others' No. 1 Murphy, SW cor. NW SE, Section 23-7-21w, has drilled to 50 feet and shut down.

Kay County

Martin and others' No. 1 Barrett, NW cor. SW SE, Section 31-27-2, is drilling at 236 feet. McComas and others' No. 1-A Smith, C NW NE, Section 6-28-1, is a rig on the ground. Carter Oil Co.'s No. 2 Jameson, NE cor. NW NE, Section 17-27-1w, has been abandoned at 3,651 feet.

Kiowa County

O. B. Riley's No. 1 Grebb, SW cor. NE, Section 6-7-16w, is drilling at 50 feet.

Latimer County

Le Flore County Gas & Electric Co.'s No. 12 McFarrell, SE cor. Secton 2-6-22, has been completed for 20,000,000 feet of gas in sand at 1,592-1,800 feet.

Lincoln County

Thomas B. Slick's No. 1 Hamner, SE cor. SW NW, Section 35-16-2, has been abandoned at 6,102 feet. Coline Oil Co.'s No. 1-A Telford, NW cor. SE, Section 7-14-4, West Chandler Pool, made 2,687 bbls. in 12½ hours from sand at 5,031-44 feet. Magnolia Petroleum Co.'s No. 2 Freeman, SE cor., Section 8-14-4, is a dry hole at 5,105 feet. The Prairie Oil & Gas Co.'s No. 1 Mayer, NE cor. NW, Section 17-14-4, has been completed for 922 bbls. in Wilcox sand at 4,946-60 feet.

Logan County

Thomas B. Slick and others' No. 1 Jones, C SE NW, Section 24-17-2w, is drilling at 2,354 feet.

McIntosh County

N. J. Weible and others' No. 1 Asbill, SE cor. SW SE SE, Section 35-12-17, is dry and abandoned at 857 feet.

Muskogee County

F. L. Beam and others moved a machine in for No. 1 Begum, NE cor. SE NW, Section 20-15-18. H. Burke and others' No. 1 L. Fields, SE cor. SW SE NW, Section 9-15-18, is dry and abandoned at 995 feet. J. W. Foltz' No. 4

Spaulding, NE cor. NW NE SW, Section 9-15-18, has been abandoned at 991 feet. F. L. Beam and others' No. 1 Thomas, NW cor. NE SW SE, Section 17-15-18, has been completed for 2,874,-931 feet of gas in sand at 1,261-66 feet. Hall and others' No. 1 Harris, SE cor. NW SW, Section 8-15-19, is dry and abandoned at 1,053 feet.

Okfuskee County

Atlantic Oil Producing Co.'s No. 2 Mackey, NW cor. SW SE, Section 36-12-10, is an old well rigging up to deepen from 3,030 feet. Gilcrease Oil Co.'s No. 4 Wind, NW cor. SE NE, Section 35-11-9, has been completed for 10 bbls. in sand at 1,472-91 feet. Fern Oil & Gas Co.'s No. 1 Turner, CEL SE SE, Section 24-11-10, is pumping 8 bbls. from sand at 1,852-59 feet after it was plugged back from 2,308 feet. Sunray Oil Co.'s No. 3-A W. Dindy, CEL SE NW, Section 31-11-11, made 15,750,000 feet of gas in sand at 3,067-75 feet.

Oklahoma County

Indian Territory Illuminating Oil Co.'s No. 2 View Point, SE cor. SW SE, Section 10-11-3w, Oklahoma City Field, is a cellar. Sinclair Oil & Gas Co. and Independent Oil & Gas Co. made location for No. 2 school land No. 69, NW cor. NE SW, Section 36-11-3w. Indian Territory Illuminating Oil Co. has the cellar dug for No. 8 Oklahoma State, SW cor. SE NW, Section 36-11-3w. Thomas B. Slick's No. 1 Martin, C NW NW, Section 13-13-1w, has been abandoned at 6,964 feet.

Heenan-Coe Co.'s No. 2 Cunningham, NW cor. NE SW, Section 1-11-3w, has been completed for 15,415 bbls. in sand at 6,377-6,420 feet. Jack Shaffer's No. 1 Arnold Baker, SW cor. NW SW, Section 1-11-3w, made 15,264 bbls. in sand at 6,390-6,466 feet. Thomas B. Slick & Atkinson's No. 4 Baker, NE cor. SW NW, Section 1-11-3w, made 19,238 bbls. from sand at 6,385-6,493 feet. Thomas B. Slick and others' No. 1 Saddie Carter, SW cor. NE SW, Section 1-11-3w, made 18,177 bbls. from sand at 6,230-6,504 feet. Thomas B. Slick & Atkinson's No. 1 Crawford, SW cor. NW, Section 1-11-3w, made 13,883 bbls. from sand at 6,195-6,545 feet. Thomas B. Slick's No. 1 Foote, SE cor. SW, Section 2-11-3w, has been completed for 4,490 bbls. in sand at 6,321-6,599 feet. Wirt Franklin Petroleum Corp.'s No. 6 Theimer, SE cor. SW SE, Section 2-11-3w, has been completed for 9,096 bbls. in sand at 6,480-6,-568 feet. Indian Territory Illuminating Oil Co.'s No. 1 Carrico, SE cor. NE NW, Section 14-11-3w, flowed 9,744 bbls. from sand at 6,430-6,524 feet. Indian Territory Illuminating Oil Co.'s No. 1 Spillman, SE cor. NW SE, Section 14-11-3w, made 10,227 bbls. from sand at 6,445-6,526 feet. Indian Territory Illuminating Oil Co. and Hall & Briscoe's No. 1 Holman-Gray, NW cor. SE NW, Section 14-11-3w, made 5,290 bbls. from sand at 6,475-6,544 feet. Coline Oil Co.'s No. 9 Clauer, SW cor. SE, Section 25-11-3w, made 11,948 bbls. from sand at 6,580-6,631 feet. Indian Territory Illuminating Oil Co.'s No. 11 Emerson, SW cor. NW SW, Section 30-11-2w, made 1,312 bbls. from sand at 6,365-6,497 feet. Indian Territory Illuminating Oil Co.'s No. 3 Sudik, NW cor. NE SW, Section 31-11-2w, has been completed for 14,631 bbls. in sand at 6,500-58 feet.

Okmulgee County

Lavery and others moved a machine in for No. 2 C. Rentie, NW cor. SW SW, Section 11-15-14. F. D. Misner's No. 3 Z. Colbert, CSL NW NE SW, Section 14-14-14 is spudding. A. McInturff's No. 1-A C. Grayson, NE cor., Section 5-13-14, is drilling at 1,690 feet. Kirkland & Sons' No. 1-A E. Brown, NW cor., Section 28-15-13, has been abandoned at 2,066 feet. E. J. Lambert's No. 1-A G. Stevens, C E half NW, Section 10-14-14, made a 15-bbl. well is sand at 1,187-1,201 feet. Elm Oil Co.'s No. 12 C. Rentie, SW cor. SE SE, Section 13-14-14, made 25 bbls. in sand at 1,045-1,104 feet. J. K. Gardner and others' No. 7 L. Sutton, CSL SW SW, Section 33-14-14, has been completed for 7 bbls. in sand at 1,647-74 feet.

Osage County

Sidwell Drilling Co.'s No. 2, NW cor. NE NE, Section 35-24-8, is a rig to deepen an old well from 2,435 feet. Indian Territory Illuminating Oil Co.'s No. 435, NE cor. NW NE NW, Section 32-24-9, is rigging up. Mid-Co Oil Co.'s No. 20, CNL SE, Section 18-22-10, is rigging up to deepen from 1,968 feet. Indian Territory Illuminating Oil Co.'s No. 430, SE cor. SW SW SE, Section 28-25-12, is dry and abandoned at 2,079 feet. Galt Brown Oil Co.'s No. 3, SW cor. NE NE, Section 15-24-8, has been completed for 140 bbls. at 2,641 feet after plugging back from 2,666 feet, where it was deepened from the old total depth of 2,635 feet. Clint Moore Estate and others' No. 3, SE cor. SW SE, Section 35-22-8, made 40 bbls. in Bartlesville sand at 2,344-71 feet. A. G. Oliphant's No. 1, SE cor. NE, Section 10-21-8, has been completed for 55 bbls. in Bartlesville sand at 2,391-2,434 feet. Boston Heights Oil Co. and others' No. 3, SE cor. NE SE, Section 10-21-8, is dry and abandoned at 2,622 feet. Devonian Oil Co.'s No. 3, NE cor. SW SE, Section 30-21-10, made 75 bbls. in the Bartlesville sand at 2,008-36 feet. Sand Springs Home's No. 11, C NE, Section 5-20-11, is dry and abandoned at 2,107 feet.

Pawnee County

Magnolia Petroleum Co.'s No. 1 Newall, NE cor. SW, Section 2-20-6, is an old well rigging up to deepen from 3,041 feet. Martin and others' No. 2 Cotton, NW cor. SE SE SW, Section 6-20-8, made 20 bbls. in Skinner sand at 2,297-2,236 feet after deepening from 2,193 feet.

Payne County

Minnehoma Oil Co.'s No. 1 Shadd, NE cor. SE NE, Section 7-19-1w, Orlando Field, is dry and abandoned at 5,080 feet in the Simpson sand. Home Gas Co.'s No. 3 Kirk, SE cor. NE NW, Section 6-17-4, is dry and abandoned at 4,218 feet.

Stephens County

Barney Cockburn's No. 1 Funk, SW cor. SE, Section 19-1-8w, has been abandoned at 2,272 feet. Wirt Franklin Petroleum Corp. and Gypsy Oil Co.'s No. 1 McPhail, NW cor. SE, Section 1-2s-7w, has been abandoned at 4,529 feet.

Washita County

H. S. Kaufman's No. 1 Nelson, NE cor., Section 1-8-14w, is dry and abandoned at 1,275 feet.

Wagoner County

Cartwright & Kyle moved a machine in for No. 1 A. Childers, NW cor. NE NE NE, Section 32-18-17. Brasheers and others' No. 1 G. Kannard, NW cor. NE NE, Section 6-17-17, is rigging up. Patterson & Young's No. 2 K. Holden, NW cor. NE SW, Section 13-16-15, is spudding. Smith & Kneisley's No. 2 Smith, C N half SW, Section 23-17-17, is dry and abandoned at 1,000 feet.

Woods County

Peerless Oil Co.'s No. 1 Cromwell, C NW NE, Section 23-28-16w, has been abandoned at 6,235 feet.

Hughes County

Jarvis & Holm made location for No. 1 Brown, SE cor. NW NE, Section 17-7-8. Iglehart and Gypsy Oil Co.'s No. 1 Barnett, C NW SE, Section 28-9-10, has been completed for 38,000,000 feet of gas in sand at 3,138-51 feet. Minnehoma Oil Co.'s No. 1 Brown, SW cor. NE NE, Section 17-7-8, has been shut in for 85,-000,000 feet of gas in sand at 2,913 feet. Gilcrease Oil Co.'s No. 3 Punka, NE cor. NW NW, Section 17-5-8, Allen Pool, is dry and abandoned at 2,845 feet.

Carter County

Magnolia Petroleum Co.'s No. 8 Gill is a location in the SE NE SE, Section 23-1s-3w. Wirt Franklin Petroleum Corp.'s No. 2 Mitchell, NE NW SE, Section 24-1-3w, rigging up rotary. No. 3 Mitchell is a rig on ground in the SW cor. NE SE, Section 24-1-3w. Trevelyn Oil Co.'s No. 2 Mitchell, NW cor. SW SE, Section 24-1-3, drilling at 1,575 feet. No. 3 Spigner, SE cor. SW NW, Section 24-1-3w, rigging up rotary. Anderson's No. 3 Eaves is a rig in the SE cor. NE SW, Section 24-1s-3w. Magnolia Petroleum Co.'s No. 2 Spigner, NW SE NW, Section 24-1s-3w, is a location. No. 3 Spigner, SE cor. NW, Section 24-1s-3w, is a location. No. 4 Spigner, NE cor. NW NW, Section 24-1s-3w, is a rig. F. W. Merrick, Inc.'s No. 1 Mitchell, SE cor. NW SE, Section 24-1s-3w, rigging up rotary. Magnolia Petroleum Co. is rigging up the rotary for No. 1 Hooks, SW cor. NE, Section 24-1s-3w. No. 1 Dickerson, NW cor. NE SE, Section 24-1s-3w, is a location. Lively & Hall's No. 2 Coffee, NW cor. SW NE, Section 25-4s-3w, is drilling at 1,605 feet. Trevelyn Oil Co.'s No. 1 Mitchell, SW cor. NW SE, Section 24-1s-3w, has been completed for 2,300 bbls. in sand at 2,452-57 feet. Magnolia Petroleum Co.'s No. 1 Cox, SE cor. NW, Section 21-2s-2w, is dry and abandoned at 4,650 feet.

Pontotoc County

Superior Oil Corp. has the rig up for No. 8 Mauldin, SE cor. NW NW, Section 32-5-5, Bebee Pool.

Pottawatomie County

Eason Oil Co. made location for No. 2 Alfred, SE cor. NE, Section 7-9-5, Earlsboro Field. Dillon Development Co.'s No. 1 Earlsboro Townsite, Block 11, Lot 9, NE cor. SW NW, Section 8-9-5, swabbed 720 bbls. from sand at 4,373-97 feet. Commerce Development Co.'s No. 1 Earlsboro Townsite, Block 13, Lot 2, NW cor. NE SE NW, Section 8-9-5, has been completed for 350 bbls. in Wilcox sand at 4,355-67 feet. Twin State Oil Co.'s No. 3 Archer, NW cor. NE SE, Section 22-6-3, West Asher Pool, made 1,915 bbls. from sand at 3,539-47 feet.

Seminole County

C. E. Walker and others staked location for No. 1 Anderson, NE cor. SW NE, Section 22-9-5, South Earlsboro Pool. Gypsy Oil Co. made location for No. 4 Coker, NE cor. NW SW, Section 2-8-5, Carr City Pool. Carter Oil Co. staked location for No. 7 Coker, NW cor. NE SW, Section 2-8-5. The Prairie Oil & Gas Co. and T. B. Slick's No. 1 Hyde, SW cor. SE NW, Section 2-8-5, is a rig going up. Deep Rock Oil Corp. is erecting the rig for No. 1 Douglas, SE cor. SW NE, Section 30-8-8. R. T. Myers' No. 1 Hayo, SW cor. NE SW, Section 20-7-8, is a location. Sunray Oil Co. made location for No. 2 Joana, NE cor. SE NE, Section 12-5-7, West Allen Pool. Deep Rock Oil Corp.'s No. 1 Crump, NE cor. NW SW, Section 32-10-6, Searight area, has been abandoned at 4,165 feet. Carter Oil Co.'s No. 3 Rogers, NE cor. SW SE, Section 2-8-5, Carr City Pool, made 580 bbls. in sand at 4,243-53 feet. Magnolia Petroleum Co.'s No. 1 Dale, NW cor. SW SW, Section 16-7-8, has been completed for 388 bbls. in Gilcrease sand at 3,106-76 feet. Empire Oil & Refining Co.'s No. 1 Dameron, NE cor. SE NW, Section 20-6-6, Konawa Pool, produced 382 bbls. from sand at 3,913-15 feet. Harris and others' No. 3 Chupco, SE cor. NE SE, Section 20-6-6 is a dry hole at 3,085 feet. Hilton Phillips' No. 5 Hyde, NW cor. SW NE, Section 20-6-6, made 895 bbls. in sand at 2,886-91 feet. Gypsy Oil Co.'s No. 1 Cochran, NW cor. NE NW, Section 28-6-6, has been completed for 85 bbls. at 3,710 feet after plugging back from 3,778 feet in the Wilcox sand. Magnolia Petroleum Co.'s No. 1 Palmer, NW cor. NE SE, Section 31-6-8, is a dry hole at 3,190 feet. Papoose Oil Co.'s No. 1 S. Davis, SE cor. NE NE, Section 12-5-7, West Allen Pool, made 504 bbls. in sand at 2,514-40 feet.

The Texas Company's No. 4 Lewis, NE cor. SE NW, Section 13-5-7, has been completed for 250 bbls. in the Cromwell sand at 2,840-59 feet. Gypsy Oil Co.'s No. 7 Peters, NW cor. SW NE, Section 23-5-7, has been abandoned at 4,264 feet.

GULF COAST FIELDS

(Continued from Page 74)

well, which is a 500-foot eastward extension, came in flowing 1,000 bbls. of pipe line oil from sand and shale at a total depth of 4,262 feet. The eight producers of the field are all grouped in the Boyt tract, each test drilling having made a well. The field, a geophysical salt dome prospect, is located in southern Liberty County and is controlled by the Gulf Production Co.

At Lockport, Vacuum Oil Co.'s No. 7 Farquahar has made a 100-bbl. well, flowing pipe line oil, with a half million feet of gas, from sand at 4,818 feet. It is producing on a three-eighths inch choke with pressure of 600 pounds. This well is an east offset to Union Sulphur Co.'s No. 1 Moss, which last April was completed flowing 600 bbls. daily from a total depth of 4,814 feet. That well was 2,000 feet west of the Lockport Field with Vacuum Oil Co.'s Farquahar tract intervening. Union Sulphur Co.'s well at present is producing approximately 100 bbls. daily after being worked over several times. A third well, Union's No. 2 Moss, in the same area is in oil sand but somewhat deeper at 5,037-55 feet. It has set 9⅝-inch casing. Union also is drilling another, No. 1 Martha Moss, which is below 3,900 feet.

Pierce Junction

Rio Bravo Oil Co. has obtained some new deep production on the west side of Pierce Junction in a sand at a total depth of 5,504 feet. The well, No. 12-A Settegast, was completed flowing 1,250 bbls. daily with pressure of 220 pounds. On the east side of the dome, Navarro Oil Co. and Texas Exploration Co. early in the week brought in No. 19 Dooley flowing 700 bbls. daily at 4,850 feet.

Other coastal completions included Yount Lee Oil Co.'s No. 5 fee, Spindletop, a former well deepened to 4,294 feet, flowing 920 bbls. of fluid, 60 per cent water; same company's No. 137 McFaddin, Spindletop, a gas well spraying some oil and water from sand at 5,430 feet; J. F. Bashara's No. 1 White, Hull workover, flowing 250 bbls., 3,981 feet; Houston Oil Co.'s No. 15 Barngrover, Hull workover, flowing 150 bbls., 3,837 feet; Republic Production Co.'s No. 134 Dolbear, Hull workover, flowing 125 bbls., 2,882 feet; Ratcliff Oil Co.'s No. 2 Martin, Jennings, flowing 700 bbls. of fluid, 50 per cent water, 1,700 feet; Pure Oil Co.'s No. 11 Mayes, Lost Lake, pumping 75 bbls. net oil, 2,830 feet; and Ada Belle Oil Co.'s No. 140 Gulf, Batson, pumping 325 bbls. of fluid, 50 per cent water, 1,159 feet.

Yount Lee Oil Co.'s No. 137 McFaddin, mentioned above, is a semiwildcat located approximately 700 feet to the southward from production on the south side of the dome.

COMPANIES ASK OUTLET UNDER PIPE LINE LAW

AUSTIN, Tex., Aug. 2.—The first application of the common purchaser pipe line law, enacted by the last legislature, will be the request of Nash & Windfohr, H. L. Brown and the Golden West Oil Co. for protection by order of the oil and gas division of the railroad commission requiring the four pipe lines operating the Salt Flat Field, near Luling, to purchase and transport a proportional amount of their production.

Hearing on the request of the three producers to require the pipe line carriers, who are common purchasers under the definition of the act, to handle their production, has been set for August 6, R. D. Parker, chief of the oil and gas division, said.

The three companies previously were served by a small refinery near Luling, but were left without pipe line connections when it closed. They made application to the four common purchaser pipe line companies operating in the field for transportation of their production. The Shell Pipe Line Co. agreed to give them temporary accommodations until a hearing could be held by the oil and gas division. Under the law, the pipe line companies may be required to take their pro rata of the production of companies without pipe line connections.

BETTER BUSINESS BUREAU

The business men and civic societies of Oklahoma City have sponsored the formation of a Better Business Bureau for their city which has recently been organized as a nonprofit Oklahoma corporation with H. G. Mitchell as general manager.

COLON OIL PRODUCTION

Production of Colon Oil Corp.'s subsidiary in Venezuela for the week ended July 25 was 87,833 bbls.

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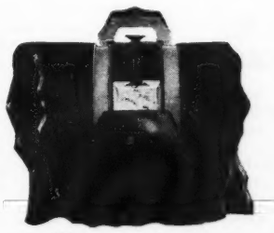

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Natural Gas Industry Developments

CHANGE TO ARTIFICIAL GAS IN MUSKEGON SEEN

MUSKEGON, Mich., Aug. 4. — Although indications now are that work will be started soon on a deep test within the proved Muskegon Field that may strike new natural gas resources in formations lower than the present known gas pay sands, it is predicted that it will be too late to save domestic consumers of Greater Muskegon from a probable changeover to artificial gas in the near future. While there is still enough natural gas in the field to supply the comparatively small summer demands of the Muskegon Gas Co. customers, it is doubtful whether that supply will last until the deep test well shall have tested out the Niagara formation at about 3,700 feet deep or other lower formations at a greater depth.

It was because of the rapid decline in the supply of natural gas that officials of the Muskegon Gas Co. and domestic consumers had hoped that the deep test would be started early enough to avoid the changeover.

It has been indicated, too, that if the change back from natural to artificial gas is made next fall the company will never change again to natural gas.

While no definite announcement as to plans of the Muskegon Gas Co. has been made, it is known that about September 1 the company will have completed its 1930 construction program including the installation of a new and larger water gas machine for the manufacture of artificial gas. While other phases of the expansion program will be just as useful under present conditions for the sendout of natural gas, the water gas machine cannot be used until the changeback is made.

CALIFORNIA TOWNS WILL CHANGE TO NATURAL GAS

SAN FRANCISCO, Calif., Aug. 4. — Complete changeover from manufactured gas to natural gas in four counties and 52 communities in central California served by Coast Counties Gas & Electric Co., subsidiary of Pacific Public Service, will be accomplished about August 15. Announcement of the change was made by Joseph B. Wilson, president of Coast Counties Gas & Electric Co.

Final changeover of service will be made in Santa Cruz. Although service in Contra Costa County, Santa Clara County and San Benito County has been in effect for some months, delay in Santa Cruz County was due to a suit brought against the company to prevent acquisition of a transmission line right of way. When this was settled satisfactorily work was rushed on the completion of 10 miles of high-pressure transmission lines connecting Santa Cruz, Watsonville, Aromas, San Juan, Capitola, Soquel and other points with the main transmission line in the vicinity of Hollister.

Bringing of natural gas to central California by Coast Counties has put several new towns with an increased number of consumers on the distributing system, including Walnut Creek, Bay Point, Brentwood, Morgan Hill, San Martin, Tree Pinos and Aromas.

WAINWRIGHT GAS RATES

CHATHAM, Ontario, Aug. 4.—An order has been issued by Alberta Public Utilities Commission reducing the natural gas rates for the town of Wainwright from 45 cents to 33 cents with 5 per cent prompt payment discount. Wainwright is supplied by the Wainwright Gas Co. from wells of the Maple Leaf Oil & Gas Co. close to the town.

SOUTHERN NATURAL GAS MAKES LONG CONTRACTS

Southern Natural Gas Corp., a subsidiary of Tri-Utilities Corp. has entered into a long-term contract to supply natural gas to the Insull properties which now use manufactured gas and operate in Biloxi, Handsboro, Mississippi City, Long Beach and Pass Christian, Miss. The population to be served with natural gas for domestic purposes in these cities exceeds 30,000. In addition, a large volume of gas will be supplied for industrial consumption under contracts now being negotiated. The corporation also recently signed a contract with the Masonite Co. at Laurel, Miss., whose requirements are estimated at 2,500,000 feet a day.

Natural gas for these services will be furnished from the 201-mile branch transmission line now being built, which will also supply the cities of Jackson, Hattiesburg and Mobile. Construction is proceeding rapidly and gas is expected to be available in all of these areas about September 1. Construction of the branch line to Selma, Montgomery and Opelika, Ala., and the branch line to Griffin, Macon and Milledgeville, Ga., is progressing according to schedule and service to all of these communities will probably begin early this fall.

DOHERTY INTERESTS TO TEST ON PINCHER CREEK

Announcement has been made that the Henry L. Doherty interests will drill a deep test for gas on the Pincher Creek structure, a sharp-dip anticline east of the Rockies and just north of the Canadian line.

Alberta Fuel & Gas Co., subsidiary of the Doherty interests, has completed an extensive program of core drilling on the structure and is now rigging up for the deep test.

This structure is the same one as that on which the Weymarn well tapped a 10,000,000-foot flow of wet gas at 1,878 feet. The Weymarn well is now deepening.

The Pincher Creek structure is similar to those found all along the face of the mountains, farther south in Montana, and is a northern continuation of the one on which the Fulton Petroleum Co. is now preparing to drill.

HAMILTON BUYS HARSHBARGER

The Hamilton Gas Co. has acquired. through purchase of its entire capital stock, the Harshbarger Oil & Gas Co. This company had no funded debt or preference securities outstanding. Its properties consist of 4,763 acres improved by 50 producing wells, situated in Cabell County, West Virginia. The company also owns franchise and gas distributing system in the town of Milton, W. Va. The following officers and directors were elected to succeed the representatives of the former stockholders: W. Angamar Larner, president; Charles Chandler, secretary and treasurer. Directors: W. Angamar Larner, Arthur Peck, Chester W. Larner, Charles Chandler and William G. Buck.

NATURAL GAS FOR EVANSVILLE

The Southern Indiana Gas & Electric Co. has replaced the use of artificial gas by natural gas in Evansville, Ind. There are approximately 17,000 meters in the city and requirements are being supplied under a 10-year contract. In addition to Evansville, the corporation supplies Vincennes, Princeton and Washington, and through franchises Oakland City and Francisco, Ind. Construction will begin soon on distribution systems for Monroe City and Bicknell, Ind.

AMERICAN UTILITIES ENTERING EASTERN AREA

The American Utilities, General Corp. and the Moody-Seagraves interests have acquired in the last six months 1,000,000 acres of natural gas producing lands in Kentucky. The southwestern group thus enters the eastern nautral gas situation. Its acreage in Kentucky has reserves estimated at 480,000,000,000 feet.

The group is reported now to be negotiating with public utility interests operating to the north and northeast of the Kentucky fields for supplies of natural gas. The interests which operate in this territory are the Insull system, the Byllesby group, the Columbia Gas & Electric System and several smaller organizations.

The appearance of the American Utilities, General Corp. and Moody-Seagraves group east of the Mississippi caused some surprise in financial circles, as they have ben chiefly active in Stevens County, Kansas, fields since their participation in the creation of the United Gas Corp., controlled by the Electric Power & Light Corp. of the Electric Bond & Share group.

The Argus Production Corp., controlled by the American Utilities, General Corp., and Moody-Seagraves group, has proceeded rapidly with the development of the Stevens County field, where there is now an open flow capacity of 150,000,000 feet controlled by the group. This gas is to be sold to the Lone Star Gas Corp. for distribution.

American Utilities and General Corp. has large minority holdings in the Dominion Gas & Electric Co., incorporated recently as a subsidiary of the American Commonwealths Power Corp. to acquire the Candian gas and electric properties of the International Utilities Corp. These properties included natural gas acreage with a known capacity of 175,000,000,000 feet in western Canada.

The new Kentucky holdings of the American Utilities and General group are exceeded in that territory only by the acreage of the Columbia Gas & Electric and Standard Gas & Electric groups, it is estimated in utility circles, so that the newcomers in the field are expected to play an important part in future developments in the eastern natural gas field.

SIX GAS WELLS TO BE DRILLED ON BROADVIEW

GREAT FALLS, Mont., Aug. 4.—An agreement to drill gas wells on the Broadview Dome 30 miles northwest of Billings to supply gas to Minnesota Northern Power Co. has been recorded in the county clerk and recorder's office by the Broadview Oil & Gas Corp., owner of leases in the Broadview area.

Under the agreement, the Broadview company agrees to sink six test wells in six months at locations which meet requirements of geologists of the purchasing company.

Each well must have a minimum flow of 2,000,000 feet daily and the Broadview company agrees to have gas available of an aggregate amount five times the maximum daily demand. The company also is required to open up wells as they are needed, up to 50,000,000 feet, in 24 hours.

SIGN GAS CONTRACTS

The Alabama Natural Gas Corp., affiliated with the Southern Natural Gas Corp., has contracted with the Normal Industrial Institute of Tuskegee to supply approximately 600,000 feet of natural gas a day. Alabama Polytechnic Institute at Auburn has contracted for 200,000 feet a day. Delivery on both contracts will begin September 1.

FIVE GAS SYSTEMS IN MONTANA CONSOLIDATE

The Montana Natural Gas Co., incorporated in Delaware with a temporary capitalization of 2,000 common shares, is a new natural gas affiliate of the Northwest States Utilities Co., and plans to merge five active natural gas systems now operating in Montana.

The Northwest State Utilities is a subsidiary of the Minnesota Northern Power Co. of Minneapolis. It has headquarters in Great Falls, Mont., and is expected to carry on operations of the Minnesota Northern Co. in that State.

With the proposed consolidation of natural gas properties in Montana, the system plans to extend its operations to central and northern Montana and to insure a large reserve supply of natural gas by the construction of a pipe line from the Kevin-Sunburst Field in northwest Montana to the Sweet Grass Hills near the Canadian border to connect with the existing national gas pipe line now serving Great Falls.

The properties acquired by the Northwest Utilities Co. are the Montana Cities Gas Co., the Northern Natural Gas Development Co., the Central Montana Utilities Co., the Havre Natural Gas Co. and the Pondera Utilities Co. It is reported that the natural gas properties will be consolidated into the Montana Natural Gas Co. These companies have an extensive system of gas trunk lines, distributing systems and producing natural gas wells.

WILLIAMS IS PRESIDENT OF CONOCO SUBSIDIARY

Directors of the Ponca City (Okla.) Gas Distributing Co., subsidiary of the Kay County Gas Co. (the gas end of the Continental Oil Co.) have elected D. C. (Chris) Williams as president to succeed Harry Moreland. The latter resigned because of recently being made vice president and general manager of the Great Lakes Pipe Line Co., newly organized project sponsored by Continental Oil Co. and the Barnsdall Corp. for the purpose of constructing a $12,000,000 gasoline pipe line from Oklahoma to the Great Lakes region.

The Ponca City Gas Distributing Co. serves more than 99 per cent of Ponca City's homes. The company also sells gas to residents of Newkirk and Kildare. Gas is piped to the city limits by the Kansas-Osage Gas Co., which receives its supply from the Greyhorse and Burbank Fields in Osage County, and from the North Garber Field in Garfield County. An open flow in excess of 150,000,000 feet of gas is connected with Kansas-Osage lines.

GAS PROJECT OPPOSED

CHATHAM, Ontario, Aug. 4.—The city of Edmonton, Alberta, is preparing to oppose a project to pipe natural gas from new Kinsella Field in eastern Alberta to Saskatoon, Saskatchewan. The project is reported to be backed by New York interests, and Edmonton citizens assert that the Kinsella production should be retained as a reserve for Edmonton. The Kinsella Field was opened last fall by a Duluth syndicate whose No. 1 well got a dry gas flow, estimated at 24,000,000 feet a day, and now shut in.

BUYS GAS ACREAGE IN KANSAS

The Missouri-Kansas Pipe Line Co. has acquired a half interest in 30,000 acres of natural gas lands in the Hugoton Field in southwestern Kansas, including two producing wells supplying gas to the Argus Pipe Line Co. for resale at Dodge City, Kans.

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Personal Paragraphs About Oil Men

Sim Carson, of Tulsa, recently revisited his old home town of Petrolia, Ontario.

* * *

Mrs. William White (nee Dorothy Bullen) is en route home from the Federated Malay States, where Mr. White is a driller.

* * *

Adrian Moore, Houston, Tex., vice president and general manager of the Rycade Oil Corporation, is in New York City on a business trip.

* * *

L. H. Leist, Dallas, Tex., in charge of the Texas district office of the Stefco Steel Company, was in Houston, Tex., calling on the oil fraternity.

* * *

Harry Hanszen, Houston, Tex., Gulf Coast oil operator, has returned from a trip to Europe, where he and his family spent two months on a tour.

* * *

D. S. Kilgour, assistant secretary and auditor of the California Oil and Gas Association, has returned to Los Angeles from Vancouver, British Columbia.

* * *

Grover Crosby has returned to Petrolia, Ontario, on a three months' furlough from the Colombian fields, where he has been drilling for the International Petroleum Company.

* * *

James Charlton, Jr., of the Richfield Oil Company of California, has been appointed superintendent of all drilling and production activities of the company, with offices in Los Angeles.

* * *

J. Zaba, of the engineering staff of the Rio Bravo Oil Company, Houston, Tex., is away from his office for two weeks on vacation. He is spending the time at home and at fishing retreats on the Gulf Coast.

* * *

W. N. Craddock, chief petroleum engineer of the Pacific Western Oil Company, and Mrs. Craddock, have returned to the Los Angeles, Calif., office of the company following a vacation spent in the northern part of the State.

* * *

Dr. Gustav Egloff, who attended the sessions of the World Power Conference held in London during June, is now visiting several oil fields and refineries in Europe. His trip has included points in Poland, Rumania, Germany and France.

* * *

Closing a six months' vacation, O. W. Bryant, formerly with Root & Rhodes, Eastland, Tex., oil operators, sailed for England on July 30, en route to Masjid-I-Sulamain, South Persia, where he is employed as toolpusher for the Anglo-Persian Oil Company, Ltd.

* * *

I. W. Butterfield, of the Richfield Oil Company of California, has been promoted to division geologist and engineer in charge of petroleum engineering and subsurface work of the company's operations in the northern California division, which covers the San Joaquin Valley.

* * *

G. Stubbe, vice president and general manager of the American Askania Corporation, has left for a four months' trip to Germany. While in Germany he will spend a large part of his time at the Askania Werke A.G. at Berlin which is the factory which manufactures not only geophysical instruments sold by this company but also precision instruments of all kinds. He also will do research work while there.

* * *

Dr. N. H. Darton, of the United States Geological Survey, Washington, D. C., and his son, were guests of members of the West Texas Geological Society at an informal dinner at the Hilton Hotel, San Angelo, Tex. Doctor Darton is engaged in completing compilation of data for a geological map of Texas, from field work conducted by himself, and from information obtained from oil companies operating in Texas.

Carl Fisher, of Fisher & Lauck, Wichita, Kans., oil producers, has returned home from a trip through Colorado, Wyoming and New Mexico.

* * *

Mr. and Mrs. E. L. Baird, who have been spending the past three months in England and Canada, have left for Talara, Peru, where Mr. Baird is on the International Petroleum Company staff.

* * *

Dr. Roy R. Morse, geologist for the Shell Oil Company of California, has left Los Angeles with Mrs. Morse for London, England, where he will spend some time in the main offices on company business.

Men in the Industry

A. L. Edsell

A. L. Edsell, who 11 years ago was a warehouseman, has been made vice president of the Louisiana Oil Refining Corporation in Shreveport, La. Only 35 years old, Mr. Edsell is widely known among the oil fraternity in the Mid-Continent, particularly among those in the refineries' sales divisions. His first experience in the business was with the Arkansas Natural Gas Company pipe line division, in which he was employed in 1914. Thereafter he was for four years with the Gulf Refining Company and the Four States Oil Company, now the Crystal Oil Refining Corporation. He left the oil business to serve two years as a lieutenant of infantry during the World War.

Two years after his discharge Mr. Edsell entered the employ of the Louisiana Oil Refining Corporation as a warehouseman in Oil City, La., and when the Homer boom developed in 1919 was transferred to that field. He was transferred again in the following year to become an assistant in the purchasing department. He left this department in 1926, having been made manager of it in the meanwhile, to become assistant manager of agency sales. The company at that time had only 40 agencies and, through its marketing agency, the Louisiana Oil Corporation, was operating in four states.

The next year Mr. Edsell was sent to Columbus, Ohio, as manager of the recently purchased Ohio division and two years later he was taken back to Shreveport as assistant general sales manager, being promoted not long afterwards to manager of retail sales which position he was holding at the time of his elevation to a vice presidency, the 40 agencies having been increased meanwhile to more than 150.

Mr. Edsell, a native of Chanute, Kans., but an Arkansan by virtue of his parents having moved to that State before he was old enough to have any say in the matter, spent his early years in Siloam Springs and attended the University of Arkansas in Fayetteville.

James Webb, of Negritos, Peru, has returned to Petrolia, Ontario, on three months' furlough.

* * *

M. E. Brock, assistant to the vice president of the Gulf Production Company, Houston, Tex., has returned from a vacation spent in California.

* * *

T. B. Timbs, Simms Oil Company, Dallas, Tex., has been transferred from the sales department and made Dallas agent of the distribution department.

* * *

C. L. Hightower, safety director of the Texas Pacific Coal & Oil Company, Thurber, Tex., and Mrs. Hightower, are spending a vacation in Brookhaven, Miss.

* * *

Kennet R. Clarke, who has been assisting H. E. Britzman of the Rio Grande Oil Company, has been appointed manager of publicity with offices in Los Angeles, Calif.

* * *

L. E. Delcuze, assistant to the vice president of the Gulf Production Company, Houston, Tex., is back at his desk after a business trip to the Pittsburgh, Pa., offices of the company.

* * *

Hugh B. Evans, president of Hugh B. Evans, Inc., with offices in the Roosevelt Building, Los Angeles, Calif., has left for a 21-day trip into Mexico, where he has extensive ranch holdings.

* * *

J. B. Ogletree has been transferred by the Magnolia Petroleum Company from its Oklahoma City, Okla., office to Wichita, Kans., and is assistant to Fred E. Mallonee, superintendent of production.

* * *

Charles Hall has returned to his duties in the geological and scouting department of the General Petroleum Corporation, Los Angeles, Calif., following a vacation fishing for trout in the High Sierras.

* * *

Curtis Plumly, formerly steamship agent for the Magnolia Petroleum Company at Beaumont, Tex., has been transferred to the sales department in an executive capacity with headquarters at Houston, Tex.

* * *

C. C. Coults, general field superintendent, with the Burma Oil Company, and his assistant, F. McAteer, are on a tour of oil fields in the United States. They were guests of E. L. Decker, of the Martin-Decker Corporation of Long Beach, Calif., last week.

* * *

Albert B. Stevens, a graduate of the University of California and until recently with the production department of the Gypsy Oil Company in Oklahoma, has been added to the faculty of the college of engineering of the University of Southern California as instructor in general engineering.

* * *

Horace Royer has joined the land department of the Indian Territory Illuminating Oil Company. He was formerly in charge of the land department of the White Eagle Oil & Refining Company. It is expected Mr. Royer's headquarters will be in the Bartlesville, Okla., office of the Indian Territory Illuminating Oil Company.

* * *

Francis M. Banks, for three years local manager of the Southern California Gas Company, at Visalia, has been promoted to the main office in Los Angeles. His successor will be Charles Eyman, who has been acting as district superintendent. Mr. Banks was one of the promoters for the introduction of natural gas into the southern San Joaquin Valley from the Kettleman Hills.

* * *

Roderick Burnham, of the Burnham Exploration Company, and until recently manager of lands of the Union Oil Company, has entered the aviation field as executive vice president and treasurer of the Central American Aviation Corporation, which recently inaugurated a new air line from Los Angeles, Calif., to Guatemala, South America.

Technical Questions Answered

BY CHARLES K. FRANCIS, PH.D., TECHNICAL EDITOR

This department of The Oil and Gas Journal is devoted to the manufacturing branches of the oil industry.

Those connected with the refining of crude petroleum, the manufacture of natural gasoline and closely allied industries are invited to submit their problems to Dr. C. K. Francis, technical editor. The department was created for the purpose of aiding managers, superintendents, engineers, chemists and all those engaged in the various phases of plant operation; also those connected with the marketing and utilization of petroleum products.

Questions should be submitted in as much detail as possible so as to assure a satisfactory answer.

All inquiries should be signed and if other than the given initials are to be used please indicate the desired letters.

Questions involving patented processes, intricate formulas and calculations and estimates of costs, for obvious reasons, cannot be answered. The replies will appear on this page within a reasonable time.

CHEMISTRY AND THE PETROLEUM INDUSTRY

I have recently graduated from ——— college and as I completed a chemical course would appreciate knowing to what extent is chemistry used in the petroleum business?—R. M.

The petroleum industry is largely a chemical industry. Even in the prospecting and the production of the crude oil there are many conditions that arise where a knowledge of chemistry is of value. The modern refinery could not operate without chemical assistance. The remarks of Doctor Weidlein in his paper, Industrial Changes Due to Chemistry, before the American Academy, as published in the Annals of the American Academy of Political and Social Science, September, 1928, may be of interest as quoted:

Benjamin Silliman, Jr., the eminent chemist who conducted the first scientific investigation of crude petroleum, in 1855, wrote that it was a raw material from which might be manufactured very valuable products. With an industrial history covering a period of less than 70 years, crude petroleum now is recognized as a resource of the highest economic value to society, because it is essential to agriculture, manufacturing, commerce and the pleasures of life. It is the source of gasoline, which is responsible for the development of the internal-combustion engine, the increase in the use of which has strengthened the entire aspect of modern civilization; it gives the world its supply of illuminating oils, which, by bringing a cheap light to millions of people, have constituted America's greatest gift to the uncultured peoples of the globe; and it provides the lubricating oils upon which the complex mechanical equipment of today is dependent for its operation. Then, too, part of the industrial activity of our country rests upon another petroleum product, fuel oil, which also is required for oil burning ships. The fact that crude petroleum forms the basis for a chemical products industry of almost unlimited possibilities of development, and as distinctive as the coal-tar industry of the present, brings out, in addition, its predominant importance among mineral raw materials.

The most important product obtained from petroleum is gasoline, whose yield American chemists have greatly increased by the development of "cracking" or pyrolytic processes. These methods consist in breaking up, by temperature and pressure, the more complex into the simpler hydrocarbons.

The recently announced hydrogenation process is a chemical one that promises to alter the entire refining operation especially for the manufacturer of lubricating oils.

Chemical research has shown how to extract gasoline from natural gas and to purify it for the numerous commercial applications.

PRINCIPLES OF PETROLEUM REFINING

Would you do me the favor of giving a brief statement explaining the principles of refining? Is the process essentially physical or chemical?—C. L. M.

Petroleum is a complex material containing numerous hydrocarbons, relatively small quantities of sulphur and nitrogen, and frequently traces of other substances. The simple separation of the different raw stocks may possibly be considered physical and the final purification entirely chemical.

The first separation of the petroleum products is based on temperature. Unlike a simple substance, such as water which boils at a constant temperature, crude petroleum is found to boil at different temperatures according to the nature and quantity of the substances contained in it. When water is heated under normal conditions it will boil when the temperature reaches 212° F., and no matter how much heat may be placed under a vessel containing water, it will not be possible to get anything other than steam from pure water. When the steam is conducted through a coil surrounded with a cooling medium it will return to the liquid condition, the same thing as the original substance, water.

When petroleum is heated under similar conditions it will begin to boil at some temperature; say 100° F., and if held at the temperature of 100° for a sufficient length of time, it will cease to boil. While the oil is boiling the vapors may be conducted in a pipe through a cooling medium and become condensed to a liquid. This liquid will be quite unlike the petroleum which was heated. If the temperature of the oil is raised to some higher temperature, say 150° F., it will again boil, producing more vapors that may be condensed. This liquid will be unlike the first portion; and if the temperature of 150° is maintained constant there will come a stage when no more liquid will collect, that is boiling will cease. Then if the temperature is raised still higher and held at that point, another fraction may be collected which will be unlike the other two. Such fractions known in the refining industry as cuts, represent the principles upon which the refiner separates the raw stocks or products. These fractions are blended, combined in definite ways, and purified to make each of the commercial products.

The primary substances obtained from petroleum in the order in which they are separated from the crude oil are known as gasoline, naphtha, kerosene, gas oil, lubricating or distillate, fuel oil, and after everything has been removed there may be a solid residue called petroleum coke. Wax is obtained from some petroleum by cooling the lubricating distillate and removing the wax crystals by means of presses. The crude wax must be refined.

RADIUM IN WATER FROM OIL WELLS

There are a large number of different mineral substances found in the water from oil wells and I want to know if radium is ever found associated with these minerals? Is radium ever present in crude oil?—R. D.

Radium has been reported to be present in many natural waters so it is possible that traces of this element may be found in the mineral residues from well waters.

Gurwitch-Moore, Petroleum Technology, Page 197, has this: "Petroleum and petroleum products have a comparatively great capacity for absorbing the emanations of radio-active elements. According to investigations by Himstedt and Klaus, kerosene absorbs five times as much of the emanation of thorium, and 20 times as much of the emanation of radium as water. In consequence of this various fresh crude oils have been found to exhibit strong radio-activity."

Day, Handbook of the Petroleum Industry, says: "Many petroleums show radio-activity, especially when they have just been taken from the ground. Radio-activity diminishes when the oil is stored, and finally disappears. No radium compound has yet been found in oils, and the rate at which radio-activity disappears seems to indicate that it is caused by radium emanation, absorbed during passage through the earth."

A recent announcement states that members of the Scientific Institute of Grosneft operating the Grosny fields have discovered a large content of radium in the water from the wells drilling in that district. This discovery has suggested a study of other fields. The Radium Institute of Moscow has sent experts to the Baku area to investigate the oil well waters there for the possible presence of radium. It is proposed that an organized study should be made of both districts, also the waters of Daghestan and Berekei should be included in the search for radium possibilities.

MOSQUITO OIL SPECIFICATIONS

We have a request for mosquito oil and would like to know just what kind of oil can be used for spraying ditches and ponds to kill the mosquito. Have you any reliable information with specifications about such oil?—H. T. O.

The United States Department of Agriculture has for some years conducted investigations with the object of exterminating the mosquito and has published much information concerning the life history, habits, and natural enemies of the insect. Many of the states have co-operated in this work.

Dr. J. M. Ginsberg, of the New Jersey Experiment station, has been in charge of research work involving the properties of oils suitable for inhibiting the growth of the mosquito. A report of the work was published in The Oil and Gas Journal, December 27, 1928, page 150. The material following is based on this report.

While the biochemists have been able to procure an oil that kills rapidly and spreads well there has been difficulty in obtaining an oil with lasting qualities. There is a wide demand for such an oil so the refiner should give the problem serious consideration. Experiments at the New Jersey station have shown that an oil of approximately the following specifications possesses efficient killing and spreading properties:

Gravity, 30/34 A.P.I.
Flashpoint, 130/140° F.
Boiling range, 350/740° F.

The highest killing fraction from mineral oil is that distilling between 300 and 500° F.; the lower boiling fractions volatilize too rapidly from the surface of the water or from the larva itself, while the higher fractions do not penetrate enough into the larva to effect rapid kill. While the fraction is a rapid killer and spreads well it lacks lasting properties. Because of the high volatility it soon disappears from the surface so that breeding may recur within a few days. An oil is desired which will last from two to three weeks.

An oil having the properties indicated in the table was suggested.

Gravity, 30/34 A.P.I.
Flashpoint, 130/140.
Distillation range

Per cent	Temperature °F.
10	300/400
40	400/550
50	550/750

Oil of this character produces a uniform film on the surface of either fresh or salt water; possesses good spreading; kills larvae and pupa within 30 minutes; and lasts for about 8 to 12 days.

The heavy fuel oils do not give a uniform film, that is, they lack spreading quality. Distillate fuel oil may be modified to meet the requirements for good mosquito oil.

VOLUME OF VAPOR FROM GASOLINE

Can you furnish references or information regarding approximate volumes occupied by gasoline of various physical and chemical characteristics when in vapor form at some specific temperature and pressure? I want to convert gallons of a cracked gasoline at 60° F. to cubic feet of vapor under four atmospheres pressure at 375° F. The gasoline is 56.2 A.P.I. gravity; initial 100° F.; 20 per cent off at 190; 50 per cent off at 283; 90 per cent off at 392; endpoint 410° F. —L. C.

Under atmospheric conditions of pressure 1 gallon of gasoline may be calculated to produce from 30 to 35 cubic feet of gas or vapor. The quantity of gas that may be obtained from any given gasoline will, of course, depend entirely upon the composition of the gasoline.

It is generally accepted that equal volume of all gases under the identical conditions of temperature and pressure contain the same number of molecules. The pound mol is derived from this statement, or more exactly from the gram molecular volume; i.e., the volume of a gas weighing the gram equivalent of the molecular weight has been found by actual experiment to measure 22.4 liters. Converting this to pounds, the statement becomes: the molecular weight of a gas in pounds will measure 375 cubic feet at 60° F. This is approximately true for any gas and is convenient when making gas volume calculations.

The common gas laws must be included in the calculation so as to correct for the change in volume under the different conditions of temperature and pressure. A full discussion of these laws may be found in numerous texts treating with stoichiometry. See especially "Principles of Chemical Engineering," by Walker, Lewis and McAdams.

Since the molecular composition is not known it will be necessary to assume, for the purpose of the calculation, that the gasoline has a composition represented by a hydrocarbon of the density and average boiling point shown. This may be found in any of the standard books on petroleum.

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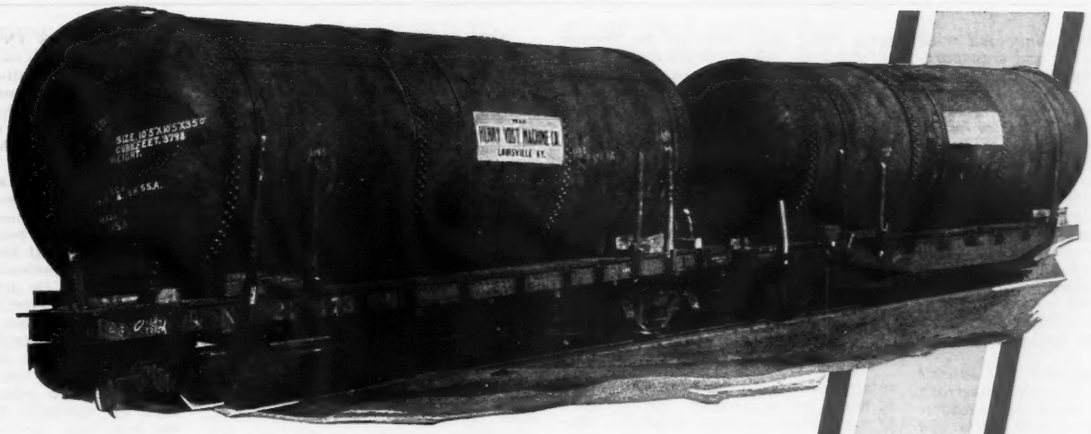

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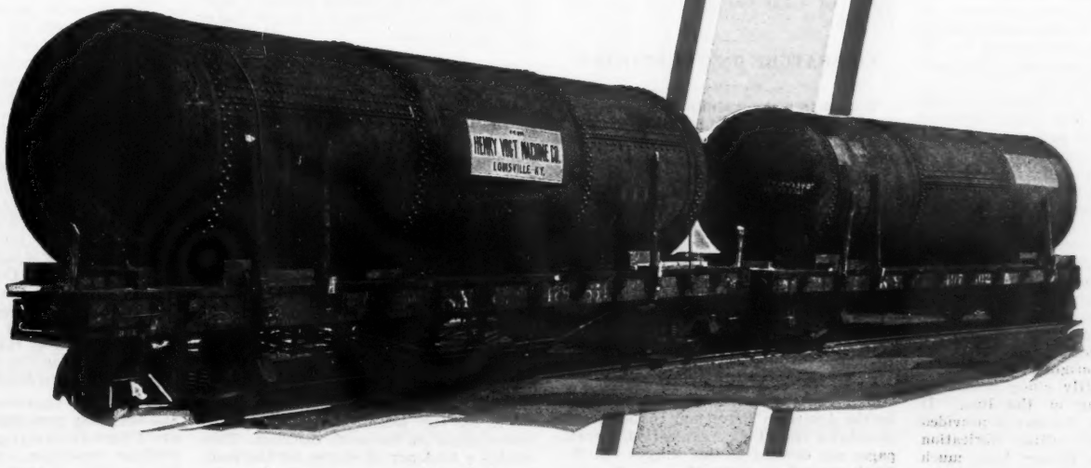


Field Problems and Their Solution

EDITED BY THOMAS F. SMILEY

In order that men connected with the drilling, producing and transporting branches of the petroleum industry may procure quickly a solution of many problems confronting them from time to time in their work, The Oil and Gas Journal has arranged with leading engineers and other recognized authorities to answer questions submitted by readers of this publication pertaining to the work of drilling and producing crude oil and transporting this product.

Everyone is invited to submit questions freely. These questions will be submitted to proper authorities by Mr. Smiley, who edits the page, and answers, based on the best available information, will be published. Each question should give as much detail as possible, especially where it relates to matters where depths of sands, types of sands and operations on adjoining properties would have a bearing on the problem involved. The source of all questions only initials will be published in connection with the question.

In this connection, The Oil and Gas Journal will be glad to publish articles from field men who have devised new methods or practices which are improvements.

In case an immediate answer is important, one will be given by mail if the writer requests it.

LONGER LIFE FOR WIRE LINE

It looks to me as though I am not getting as much service out of wire lines as I ought to and I am wondering if the reason is in the way I oil them. After I put a wire line on the hoisting drum I give it a good soaking with crude oil. Then I do the same thing again from time to time after that. In spite of this the lines wear out sooner than they ought to. I would be glad to know the best method of oiling a wire line to make it last as long as possible.—O. S. T.

Your method of lubricating a wire line is a common one, but it does not provide the lubrication needed, for most of the crude oil which you put on is thrown off quickly. Such of it as does penetrate the line is likely to be detrimental to the lubricant previously applied to the core of the line in the factory.

Wire lines should be lubricated both inside and outside. The inside lubricant should penetrate until each separate wire is covered with a coating of the oil. To preserve the benefits of the lubricant applied to the core by the manufacturer of the wire line this core must continue to receive lubrication. You may have observed that the surface of a new wire line soon becomes oily even though no sort of lubricant has been applied by the driller. This is the result of the lubricant applied to the core by the manufacturer being pressed out by the pressure exerted in using the line. If the core loses all this original lubricant, it will deteriorate swiftly along with flattening and breaking of the line. If proper lubrication of the core is provided in the oil field the initial lubrication administered in the factory lasts much longer and the line keeps its pliability and original shape better.

After a wire line has been spooled on the hoisting drum a heavy lubricant should be applied each day to that part of it which runs on the drum. Outside lubrication is designed to reduce deterioration and abrasion which necessarily occur as a result of the friction to which the line is subjected as it runs over the sheaves and even as it spools on the drum. Water through which the line must run penetrates to the interior rapidly, causing rust and consequent deterioration, unless a thorough coating of oil covers the outside of the cable. Once the wires are attacked by rust the pliability of the line is diminished and bending stresses cause more damage.

The lubricant used should be extremely heavy; it should be of such a quality that it will penetrate the line and it must remain on the line after it is applied.

Concerning lubrication of the wire line, the Broderick & Bascom Rope Co. says:

"Before being put into storage each rotary line may be run through a trough of heavy heated lubricant, the line being kept submerged by a row of sheaves. The line is lubricated at the rate of 10 feet a minute. Each line absorbs 15 gallons of lubricant. The cost of the entire treatment is about $40 per line, a small sum compared with the saving effected. The lines so treated reel more readily, retain their bending quality, are kept rust-proof and most certainly last longer. Such a trough may be made easily from a piece of old casing, heated by a gas burner made of a length of perforated gas pipe."

HORSEPOWER TRANSMITTED

If there is any rule regarding the horsepower transmitted by a belt, will you tell me what it is, please? What effect does the speed of a belt have on the horsepower transmitted?—S. E. F.

Two factors govern the horsepower that can be transmitted by a belt. These are the speed of the belt and the tension of the belt. The horsepower transmitted by any belt is in theory in direct proportion to the speed of the belt. That is to say, if we double the speed of a belt we at the same time double the horsepower transmitted by it.

Centrifugal force exercises an unfavorable action in the operation of a belt, diminishing the effective transmission of power at higher speeds, with the result that there is a point beyond which an increase in the speed will lessen the actual horsepower transmitted. This point, according to the calculations of engineers, is about 4,800 feet a minute for single belts and 4,400 feet a minute for four-ply belts.

LITERATURE ON GAS STORAGE

I want to make a study of underground storage of natural gas in depleted fields. Will you please advise where I may obtain the best literature and information on this subject?—H. C. I.

The bibliography on underground storage of natural gas in depleted fields is extremely limited. Although this plan is being practiced on a relatively large scale in California, there is a paucity of printed information regarding it. This may be attributed in part perhaps to the fact that each field presents its own peculiar problems.

In H. C. Miller's "Function of Natural Gas in the Production of Oil," published by the American Petroleum Institute and obtainable from that organization, several pages are devoted to this subject. S. W. Meals, president of the Carnegie Natural Gas Co., Pittsburgh, is the author of an article in The Oil and Gas Journal of April 10, 1930, on "Storing Gas in Natural Reservoirs." These may help you, but of course they fall far short of offering a complete discussion of this subject.

TWIST ON DRILLING CABLE

Oftentimes my work takes me on derrick floors where cable-tool drilling is going on. I notice that always after running in the hole with the tools the driller and the tool dresser will take a wrench or other tool and put a twist to the right in the drilling cable. What is the reason for this and is there any prescribed rule for the number of rounds of twist to put in a wire line?—D. A. M.

Different drillers probably would give different reasons for their practice of giving the drilling cable a twist. The reason likely to be given oftenest is that it "takes out the kinks" that would occur above the clamps in the loose line in the derrick after drilling has started. Tests made on the drilling floor are said to have shown that the twist above the clamp does remove kinks from the line, but that the twist below the clamps does not have any material effect on the movement of the tools in the hole.

The twist always is made in the same direction as the lay of the line. Its tendency is to tighten the strands and when the loose line between the clamps and the bullwheel hangs in the derrick it does not kink as it probably would otherwise.

Common practice is to give the cable one turn for each 100 feet of length lowered into the hole, though this rule may be modified in accordance with the character of the cable.

STRIPPING

On the farm "stripping" means to milk dry; that is, to get the last possible drop of milk from the cow's udder. It is safe to say that oil men borrowed this term to describe the process adopted in southern Mexican fields to salvage oil from wells virtually abandoned on account of the invasion of salt water. The process consists of partly opening the valve above the casinghead to create back pressure on the column of fluid in the well. Oil, being lighter than water, emerges first from the flowing well. The flow is regulated to allow the escape of as much oil and as little water as possible.

CONCERNING LAY OF CABLE

Which is the proper way for tools to spin in drilling? What lay cable is standard throughout the oil fields? The accompanying diagram shows a lay of the cable which was furnished with our machine and we take it to be left lay. Are we right?—C. E. S.

It is immaterial which way the tools spin in drilling, just so they spin. Practical drillers and rope manufacturers say the lay of the rope has little if anything to do with the direction in which the tools turn. What goes on in the hole is indicated quite clearly by the action of the spudding shoe, whose movements are visible. As the bit rebounds after striking bottom it twirls one way or the other, at the same time winding the rope slightly in the same direction. This creates a tendency of course for the tools to whirl first one way and then the other, as the rope alternately winds and unwinds.

Right-lay cable may be called standard throughout the oil fields, since manufacturers provide right-lay unless left-lay is specified. The sketch accompanying your letter is of right-lay cable.

EYE MISHAPS IN THE DERRICK

It has been a matter of pride with me to keep down the number of accidents among men on the lease as low as possible, and by using various precautions and safeguards we have kept a pretty good record. There is hardly a time, however, when there are not one or more men suffering from some small injury of the eye, usually caused by a particle of steel or iron. A peculiar thing in this connection is that these injuries almost always are experienced by derrick men rather than by the driller and other men working on the derrick floor. This may be just a coincidence. Do you know if other lease superintendents have the same experience? If so, can you tell me the explanation? I would be glad to get any suggestions that might help in reducing these eye accidents, for they seem to be our chief weak spot.—N. S. T.

Others have noted the peculiarity that you point out with regard to eye accidents, that derrick men suffer more of them than the men working on the floor. The explanation offered is that most of the flying particles falling in the derrick come from wear of the crownblock sheaves. These tiny fragments are so light that a mild breeze blows them out of the derrick before they reach the floor. The derrick man, being closer to the source of the particles, is in correspondingly greater danger of injury from them. Though most of these eye injuries are of a minor sort and cause little loss of time, it nevertheless is true that they sometimes result in impairment of sight or even loss of an eye, so any safeguards for reducing this class of accidents are well worth while.

Many eye accidents can be prevented by having all derrick workmen wear goggles. These goggles should have wide-vision lenes with leather or metal side shields perforated for ventilation. Each man should have his own goggles and nobody else should wear them. Failure to observe this precaution may result in spreading some eye infection among a whole crew.

H. C. Miller's "Safe Practies at Oil Derricks," published as Technical Paper 419 by the United States Bureau of Mines (you would do well to get a copy of it), says on the subject of eye accidents:

"The majority of eye injuries to derrick workmen are due to particles of iron and steel suspended in the air and to falling pieces of mud, particles of sand and drops of water and oil. Most of the particles of iron and steel come from abrasion of the wire hoisting rope on the sheave wheels of traveling blocks and crown blocks. Some are formed when the elevators are latched on the drillpipe, tubing and casing. Mud, sand, water and oil falling from drillpipe, tubing and sand lines, and, in cable drilling, from drilling lines, cause many eye injuries. A study of accidents that injure the eyes of workmen at wells shows that the greater number of the injuries are caused by particles of iron and steel in the air and that these particles undoubtedly have their origin in the abrasion of the wire hoisting and drilling cables on the sheaves of traveling blocks and crown blocks.

"Many eye injuries can be prevented and are being prevented by operators who are diligently carrying on a program of accident prevention. Since so many flying particles of steel are due directly to the abrasion of wire hoisting and drilling lines on sheaves and pulleys, it has been found practical to prevent the particles from falling by keeping the cables oiled."

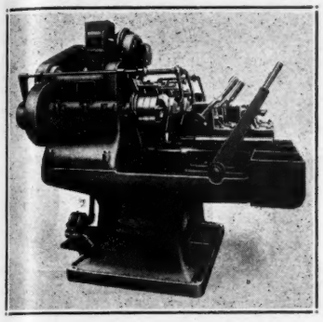
Various devices for continuously applying small quantities of oil to wire rope in service have been tried with success.

Oil Field Equipment and Supplies

BOLT THREADING UNIT HAS BEEN REDESIGNED

The Landis bolt factory threader, a triple spindle, high production bolt threading unit, built by the Landis Machine Co., Waynesboro, Pa., has been redesigned to include a constant speed motor drive and a pickoff gear box.

With the use of a gear box of pickoff type it is possible to obtain the most efficient threading speed for any particular job. Fifteen threading speeds ranging



from 38 to 271 r.p.m. are available using eight sets of interchangeable gears. Other speeds can be obtained by the substitution of different gears.

All shafts in the new gear box are made of alloy steel and are mounted on antifriction bearings, assuring trouble-free operation under all working conditions. All bearings are lubricated by the Alemite system of lubrication. The constant speed motor is direct conected to the gear box by means of a silent chain.

A low-speed, low-pressure, large-volume pump, belt driven from a constant-speed shaft floods the chasers and work with coolant. The entire coolant system has been redesigned to give a larger volume of coolant to the work at all cutting speeds. This machine is motor driven and it is made in 1 and 1½-inch triple spindle models.

FWD IS 20 YEARS OLD

The Four Wheel Drive Auto Co., Clintonville, Wis., was 20 years old on July 21. It never has been closed down except for three or four days a year to take inventory and make alterations and repairs. It has produced over $130,000,000 worth of goods, marketed in every country in the world. It has given definite and continuous employment to its employes. It has paid regular dividends to its stockholders since 1914, in addition to providing for all of its own enlargements and financing out of its own profits. It served the United States Government in the campaign in Mexico; in the Philippine Islands and in the World War. It has also served the military organizations of 14 other nations. The Four Wheel Drive Auto Co. has an organization of men and women on its pay roll, numbering 800, whose average service with the company is over 10 years.

MARLOW COMPANY ORGANIZED

The Marlow Belting & Rubber Co., disbursing rubber equipment for oil fields in Texas, has been organized in Fort Worth with Fred Marlow as president, O. F. Torbron, vice president, and W. H. Marlow, secretary and treasurer. The company will specialize in belting, hose and wire rope. Mr. Torbron has been in the oil industry 15 years. He formerly was with the Longhart Supply Co. Branch offices will be established later.

SWIVEL IS DESIGNED TO REDUCE TORQUE TROUBLE

The Okeh sucker rod swivel, manufactured by the Texas Rubber Specialty Co., Houston, Tex., is designed to prevent loss of time and production, fishing jobs and possible loss of tools resulting from the rod breakage and unscrewing attributable to the torque that develops in a string of rods. On recovery of the rod from the up and down stroke this torque may cause a joint to unscrew or the rod to break. The Okeh swivel set into the line of rods at intervals (the number of swivels depending on the depth of wells or pump) is said by the manufacturer to prevent this kind of trouble by eliminating the cause.

Each part in the assembly of this swivel is made of special alloy steel, heat treated and accurately machined, to assure maximum strength and long life. The swivel is made without open slots to prevent sand and other abrasive materials from getting into the working parts. A packer felt gasket below the bearing rings filters the lubricant from the tubing into the swivel, thus lubricating and protecting the bearings. The six heat treated, special alloy steel, polished bearing rings are grooved to insure perfect distribution of the lubricant, which assures a ready swivel movement when the rod is under strain in either direction. Provision has been made to permit minute adjustment on the bearing rings to take care of whatever slack is caused by wear.

BUSINESS NOTES

H. D. Carlton has resigned as president of Consolidated Ashcroft Hancock Co., Inc., and as vice president of Manning, Maxwell & Moore, Inc.

A new illustrated catalog containing a complete description and working details of the Continental turbine pump has been issued by the Continental Equipment Co., Inc., of Los Angeles. The book explains how the pump utilizes the atomizing principle to lift oil.

Fred Devenney has been made district representative in Tulsa for James B. Sipe & Co., paint manufacturers and engineers, Pittsburgh, Pa. He succeeds F. W. Gumaer.

Lee C. Moore & Co., Inc., Pittsburgh, Pa. and Tulsa, has appointed H. J. Woolslayer as field engineer in the Mid-Continent territory. Mr. Woolslayer has worked in the Central and South American oil fields, and has an extensive experience in this country.

F. E. Bernsen, vice president of the Lucey Products Corp., accompanied by Mrs. Bernsen, is motoring to California on a combined business and pleasure trip. Mr. Bernsen will be on the coast until the latter part of August.

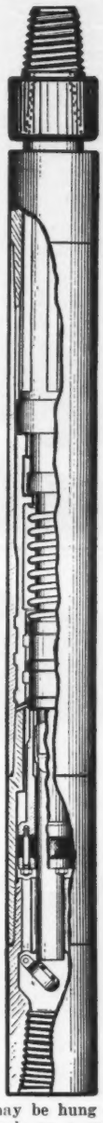
A. O. Smith Corp., Milwaukee, Wis., makers of automobile chassis frames and of large size pipe for oil and gas lines, have purchased a Bellanca "Skyrocket" six-place cabin monoplane for the transportation of executives and for other purposes.

The General Refractories Co. has opened a new district sales office in Birmingham, Ala., in charge of Walter S. Stapler.

Albert Desautels, export manager of the Wailes Dove-Hermiston Corp., has returned to New York after an extended tour of Latin America. His trip took him to Cuba, Panama, Colombia, Venezuela, the West Indies, Brazil, Uruguay, Argentina, Chile and Peru.

PUMP TRIP HYDRAULIC JAR IS ADDED TO LINE

The Shaffer Tool Works, Brea, Calif., has added to its line of fishing tools the Shaffer pump trip hydraulic jar, which is said to be simple to operate and powerful in action. The driller lowers the drill pipe to set, pulls up until he has the desired strain, gets the blow by starting the pump which trips the jar, then resets the jar by lowering the drill pipe and proceeds as before.



Thus with one man at the drawworks and another at the pump the jar is operated as fast as the drill pipe can be raised and lowered, using only the engine and brake without throwing out the clutch or having to use the table to set or trip the jar. The jar is reported to have come out of the hole after 75 hours jarring in perfect condition. Circulation is maintained at all times except when jar is set for tripping.

STRINGALITE CABLE

"Stringalite" safety lighting cable has been added by the Sullivan Machinery Co., Chicago, to its line of industrial equipment after two years of study and development and many months of exhaustive tests. It is especially adapted, not only for underground work, but for construction jobs and wherever outdoor illumination is required. The outstanding advantage offered by "Stringalite" is that is provides the safety and utility of a permanent installation, with the wiring simplicity and economy of a temporary job. Among the important features of "Stringalite" are that installation, extension or removal may be done quickly and easily by workmen on the job; it may be hung over any projecting object such as a nail, timber or bracket—no insulators or special supports are required; there are no taped joints to give trouble; entire salvage value is possible upon removal or change of location; ample light is provided where it is needed; the length may be extended to any required distance from the current source; sockets and connections are practically unbreakable; standard lamp guards may be used; and a heavy coat of tough moulded rubber covers the cable, connectors and sockets in one piece, insulating each part against electrical leakage and providing protection against moisture, corrosion and rough handling.

NEW OIL BURNER CONTROL

An oil burner control that provides automatic lighting and relighting of the fire and designed to insure against failure as a result of interruption of electrical current or of fuel supply has been put on the market under the trade name of the "Electrical Brain" by the Phoenix-Detroit Burner Corp. of Detroit, Mich.

CEMENT GUIDE DESIGNED TO PREVENT CHANNELING

An improved type of cement guide and collar designed to insure uniform distribution of cement all around the casing has received tests on major oil company wells and is now placed on the market by the Baash-Ross Tool Co., Los Angeles, Calif. The distinctive feature of these tools is a rotor, similar to that of a team turbine or centrifugal pump, which noves freely in a groove in the body. Cement is forced through a series of radial holes, striking the vanes of the rotor and causing it to revolve. The effect is the same as though the casing revolved—throwing the cement outward with a whirling or centrifugal motion in a continuous stream which completely fills the surrounding space.

Cementing collar.

Cementing guide, regular pattern.

This construction prevents leaving passages through the cement, commonly known as "channeling," which defeats the purpose of the cementing as a complete seal, and which is the recognized cause of a large part of the failures in cementing operations.

Three types are available; the regular cementing guide, the special guide, and the cementing collar. The regular guides and the collars distribute the cement horizontally. The special guide has its rotor mounted at a 45-degree angle toward the bottom of the well, to produce an effective seal below the edge of the shoe.

Guides are made of cast iron, easily drilled through after cementing is complete. They are furnished with or without casing shoes. Collars are designed to be installed at any distance above the guides where distribution of cement is desired, and are provided with cast iron diaphragms below the rotor which may be drilled out as required.

TANK COMPANY CHANGES NAME

The American Tank Co., of Oklahoma City, Okla., has announced a change in name, and henceforth it will be known as the American Tank & Equipment Corp. The concern makes so much equipment other than tanks it was deemed advisable to indicate this in the name. The American Tank & Equipment Corp. is one of the manufacturing units of Black, Sivalls & Bryson, Inc., of Bartlesville, Okla. Its other fabricating plant is in Kansas City, Mo. Along with Black, Sivalls & Bryson, it has numerous branches throughout the Mid-Continent and Rocky Mountain fields.

MADE N.G.E. AGENTS

The complete line of products of the Surface Combustion Co., Toledo, Ohio, and the Webster Engineering Co., Tulsa, will be distributed in California, Oregon, and Washington by Natural Gas Equipment, Inc., of Los Angeles and San Francisco, in co-operation with public utilities. Similarly, the complete N.G.E. line will be distributed through all Surface Combustion and Webster branch offices in principal cities throughout the other states.

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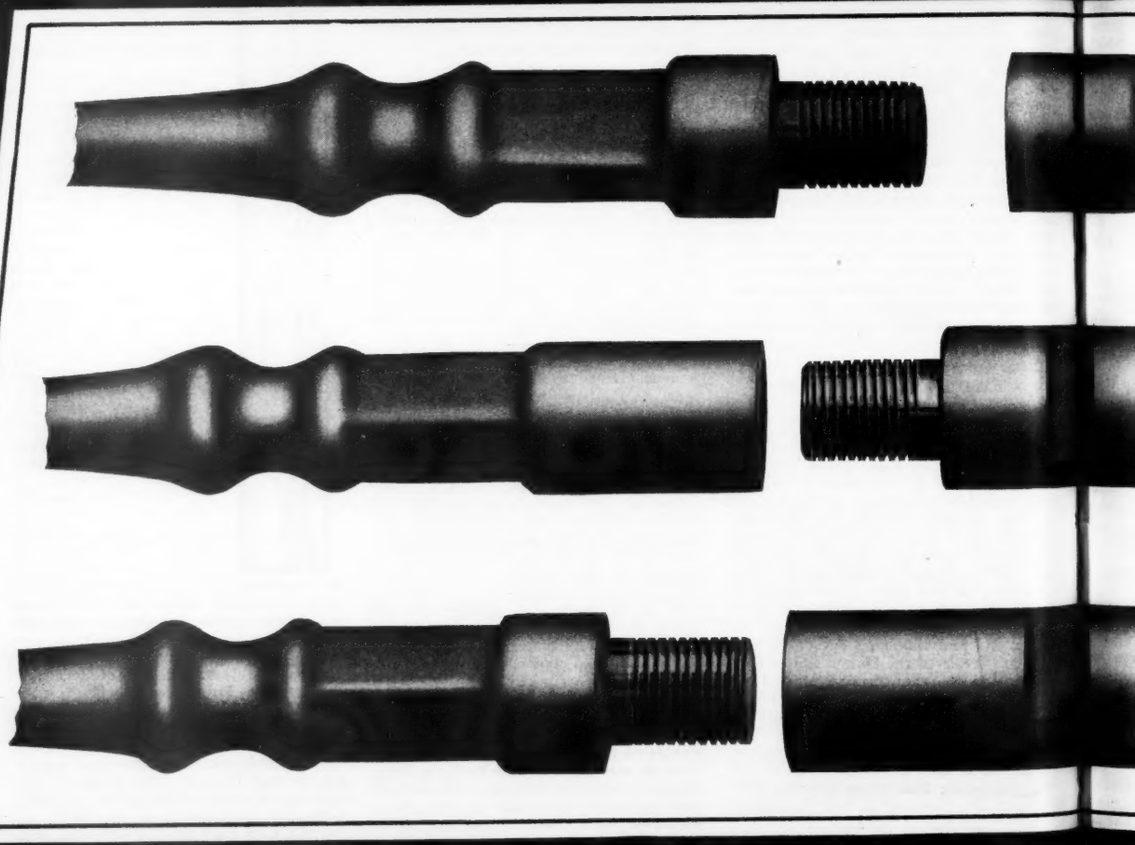

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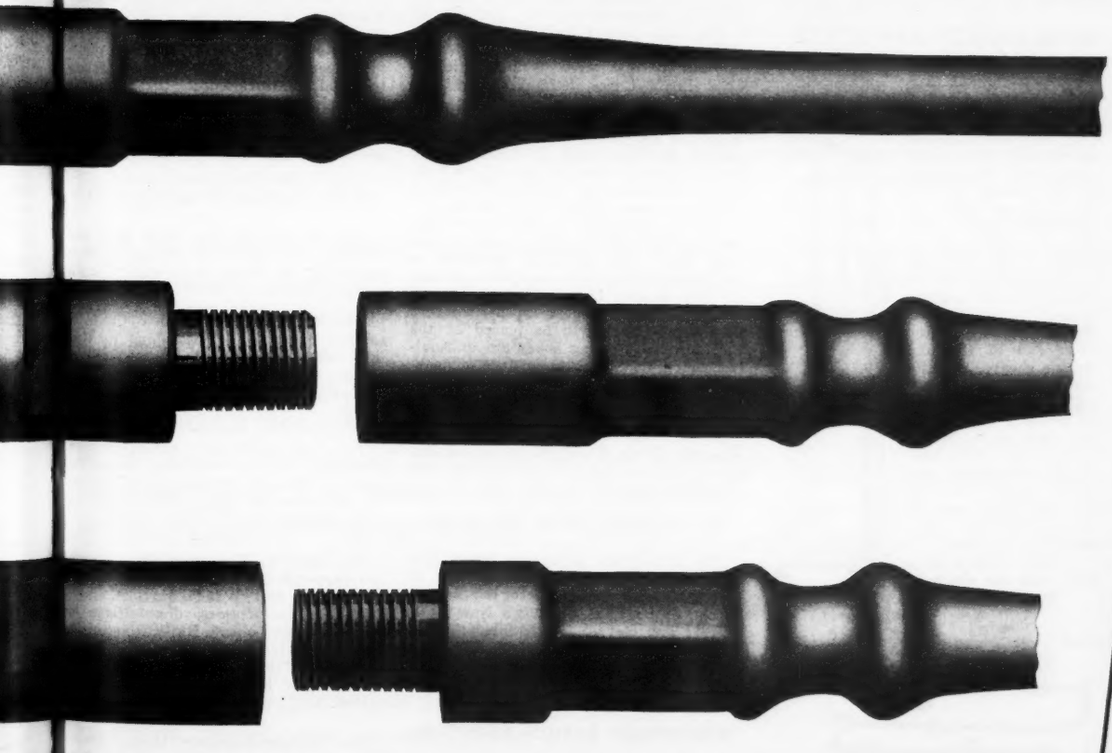
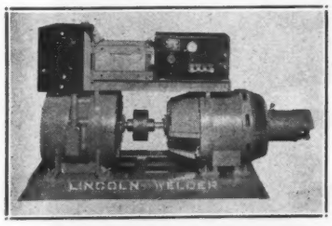


SUPPLY COMPANIES

Oil Field Equipment and Supplies

LINCOLN PUTS A LARGER WELDER ON THE MARKET

A new welder with a rating of 600 amperes has been placed on the market by the Lincoln Electric Co., Cleveland, Ohio, manufacturer of "Stable-Arc" welders and "Linc-Weld" motors. This welder was developed as a result of a demand for higher welding current to be used with large size metallic and carbon electrodes. It is used also to supply current for the "Electronic Tornado," a process of automatic carbon arc welding. It may be had in either the portable truck type or stationary truck type. It



is a motor driven, single operator, variable voltage machine and has a current range of from 180 to 750 amperes. The motor and generator are direct connected. The working mechanism of all controls is contained in a ventilated enclosed steel cabinet with hand regulators and switches mounted on a panel which forms a side of the cabinet. The control panel contains rheostat, diverter switch, safety starter switch, volt ammeter and wing nut terminals for cables. This unified control increases the simplicity of operation. The control cabinet is mounted directly over the motor generator for easy access. It permits removal of the motor generator armature without disturbing any other parts.

The use of a combined voltmeter and ammeter, known as a volt ammeter, makes possible the reading of amount of voltage and amperage on one dial and eliminates the use of the separate delicate ammeter which would be given excessive wear on a Lincoln welder, due to the large output keeping the ammeter jammed against the high limit pin on the dial. In this way the volt ammeter insures longer instrument life. The face of the volt ammeter is mounted flush with the control panel assuring the utmost protection possible.

Terminals for the lead cables are equipped with winged nuts, a feature which makes quick and easy connections possible, especially when it is desired to reverse the polarity of welding current. The use of these wing nut terminals also eliminates the necessity of a switch for reversing polarity.

USE OF SUPERHEATED STEAM

Benefits in oil well drilling through use of superheated steam are realized in the following ways, according to the Superheater Co., New York and Chicago, manufacturer of the Elesco superheater for oil country boilers: By reducing the steam consumption of the drilling engine and the fluid pump, by reducing radiation losses in pipe lines from boilers to the drilling rig, by reducing the steam pressure of the boilers for required steam pressure at the engine and pump, by increasing the pressure of the fluid pumped to the well, by increasing the capacity, speed and flexibility of the drilling rig, by increasing the life of the pumps, engines and boilers, due to better operating conditions, by decreasing the weight of the boilers required to operate the rig, by decreasing the amount of water required for boilers with corresponding reduction in scale formation, by reducing the fuel consumption and by increasing the boiler efficiency.

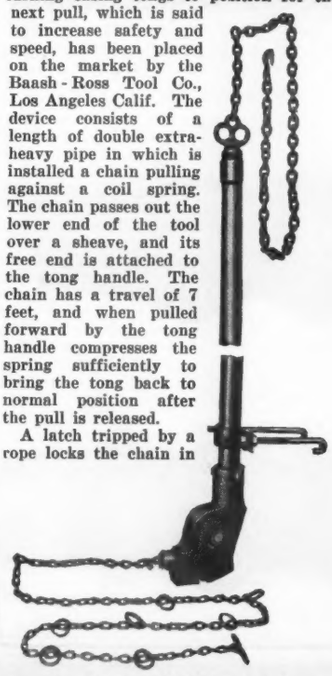
SLUSH-PUMP VALVE HAS INSERT OF NEW DESIGN

The Okeh slush pump valve, made by the Texas Rubber Specialty Co., Houston, Tex., is designed on the theory that a slush pump is only as efficient as the pump valves in its fluid end and that in turn the valve assembly is dependent upon its sealing member, the valve insert. High velocity sandy slush under high pressure, cutting through a restricted opening is the destructive element which a successful valve insert must withstand.

Okeh valve inserts can be used in a pump without changing the type of valve stem or seat already in use. The steel insert is recessed and into the recesses is molded a tough abrasion resisting and shock absorbing rubber. By a secret process this rubber insert is bonded to the steel recess. The rubber protrudes one-thirty-second of an inch beyond the 45 degree steel seating surface. A rubber extension at the top of the insert seals under back pressure after the insert has taken its seat. In service, these rubber protrusions act as shock absorbers, prevent the hammer of steel against steel and relieve the condition of expanded valve seats, which are troublesome to remove from pumps. This insert or alternate rubber and steel seating face leaves a constant protrusion of the rubber as the valve wears, leaving the rubber to seal, absorb shock, prevent slippage and withstanding high pressure.

MORE SAFETY AND SPEED IN CASING TONG RETURN

A compact, quick-acting tool for returning casing tongs to position for the next pull, which is said to increase safety and speed, has been placed on the market by the Baash-Ross Tool Co., Los Angeles Calif. The device consists of a length of double extra-heavy pipe in which is installed a chain pulling against a coil spring. The chain passes out the lower end of the tool over a sheave, and its free end is attached to the tong handle. The chain has a travel of 7 feet, and when pulled forward by the tong handle compresses the spring sufficiently to bring the tong back to normal position after the pull is released.



A latch tripped by a rope locks the chain in any desired position when slack is required to permit moving the tong from the pipe. The latch is automatically released when the tong again is placed on the pipe and forward pull taken. This tong return is suspended from a derrick girt in the corner opposite the crank, and is easily moved from rig to rig.

G. B. Lane, former manager of the Detroit office of the Foxboro Co., has succeeded J. B. McMahon as branch manager in Tulsa.

BEARINGS FOR SWIVEL ESPECIALLY DESIGNED

The new Lucey type E-6500-A "Quad" oil bath swivel is equipped with four of the best heavy-duty roller bearings that can be obtained, each designed for its particular duty by bearing experts.

The upper thrust bearing is an SKF ball bearing, designed exclusively for upward thrusts. Its construction makes it especially adaptable to the use of pull-down devices used when spudding in or drilling at shallow depths. The main load bearing is a Timken tapered roller bearing designed specially for swivel duty. This giant bearing is designed for a load of 365,000 pounds at 100 r.p.m. Two American heavy-duty roller sleeve type bearings absorb all radial thrusts, and relieve all other bearings of this duty. These bearings rigidly align the swivel stem, and minimize wear on all packing, and packing glands.

The large swivel body has an oil capacity of 10 gallons, and is braced at the top by the swivel bonnet which is of exclusive Lucey design. At the point where the bonnet presses into the body is a projection, the outside diameter of which is accurately machined where it presses into the body. Thus the bonnet forms a brace across the top of the body which eliminates the liability of the body crushing under sudden severe shocks.

The swivel bail and trunnions are oversize, and the bail is forged from a solid steel billett and carefully machined at the point where trnnions pass through it. This feature insures that the swivel will hang straight at all times so that no unequal loads will be placed on the bearings. All stuffing boxes are unusually deep, providing an abundance of packing. The gooseneck is extra heavy, and bends at a 20-degree angle, which allows the rotary hose to hang almost perpedicular, thus minimizing throbbing and pounding of the hose. The gooseneck has full 3-inch opening for fluid, as does the swivel throughout.

M. J. HARPER MADE MANAGER

The Pittsburgh Equitable Meter Co., Pittsburgh, Pa., announces that M. J. Harper has succeeded Victor E. Arnold as manager of the company's New York office. Mr. Harper has handled the export sales of the Pittsburgh Equitable for many years, besides taking care of many important accounts in the New York territory.

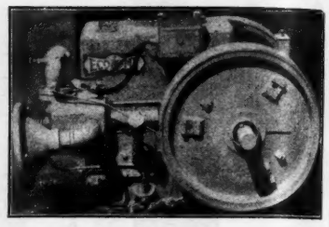
"CRUSHING" ACTION REDUCED

Petol chain tongs, made by the Gearench Manufacturing Co., Houston, Tex., require simply that the operator place the tongs on the pipe and hook the chain, without any holding up of heavy tongs. The tongs have a positive grip and ratcheting action. They may be removed instantly regardless of the load applied, without jamming. The construction of the jaws, together with the increased chain contact, reduces the "crushing" force on the pipe and increases the friction hold. The strain on the chain is more uniformly distributed owing to the pull at each end, with consequent less likelihood of breakage.

SELF-OILING ENCLOSED ENGINE IS INTRODUCED

One of the recent developments of Hercules Products, Inc., subsidiary of Servel, Inc., Evansville, Ind., is the model self-oiling enclosed engine. It is designed to offer maximum portability through minimum weight per horsepower. The weight of this engine is 175 pounds and it can be installed in a very small space.

The engine has an over-all length of 27½ inches, width of 18 inches and height of 18 inches. It develops two



horsepower at maximum speed of 775 r.p.m. The crankshaft, drop-forged and made of high carbon steel, has a diameter of 1¼ inches.

The carburetor is of the positive suction feed type with an automatic air intake which permits a rich mixture. It has only one fuel adjusting valve. Operating in conjunction with the carburetor is the Wico high tension magneto which is tripped by a push rod operating from an eccentric on the camshaft.

Bearings, timing gears, pistons, piston pins, camshaft, governor and magneto trip rod are inclosed in the crankcase. A splash system lubricates all mechanical parts within the crankcase. The cylinder head is water cooled to prevent excessive heating and valve warping.

TRADE LITERATURE RECEIVED

The Superheater Co., New York and Chicago, has issued a 16-page bulletin devoted to the Elesco superheater for oil-country boilers.

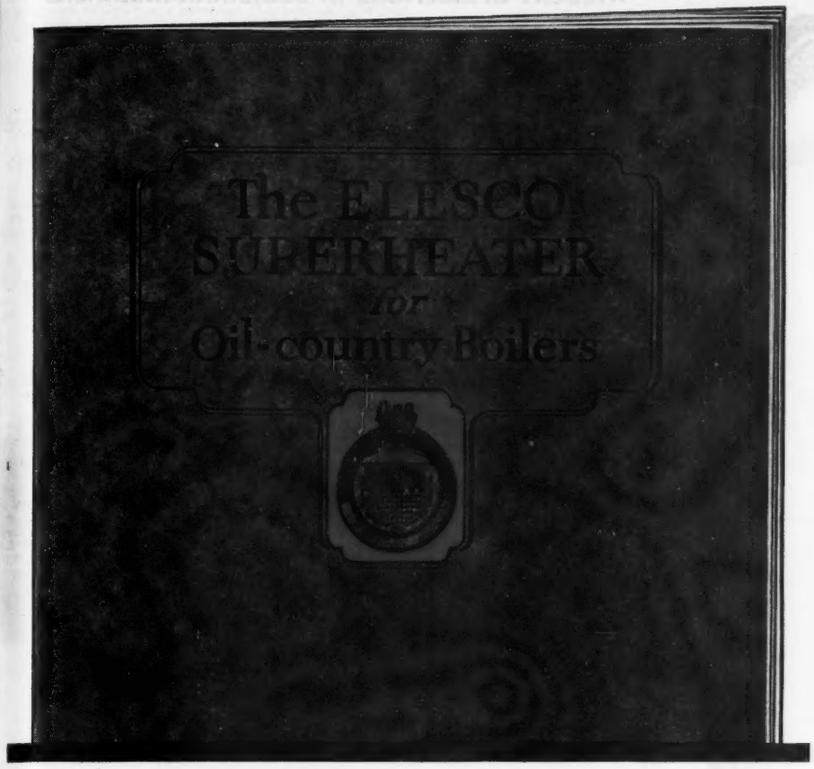
The Stoody Co., Whittier, Calif., is sending out a folder describing its flexible shaft-grinder, Universal oil-tool grinder, Universal bit-holder, combination grinder and the new Stoody electrode holder.

The Sullivan Machinery Co., Chicago, is mailing two new bulletins, one on the new L-8 rotator hammer drill and one on the new S-2 heavy-duty stoper for mine service.

The Sullivan Machinery Co., Chicago, has prepared three new bulletins, one on its WL-22 and WL-44 vertical single-stage air compressors, direct-driven by electric motors; one on its WG-6 straight-line single-stage belt-driven compressors and one of its new vertical two-stage compressors, belt-driven and direct-connected.

The Cooper-Bessemer Corp., Mount Vernon, Ohio, makers of power machinery, has made up an attractive booklet in colors from a series of advertisements which appeared in The Oil and Gas Journal. The title of the booklet is "Success Is Largely a Matter of Choosing Wisely."

Columbia University, New York, has prepared a report of tests made by its civil engineering department upon the effect of length of thread exposure on the static tensile strength and energy to rupture of Standard V and Dardelet thread and nut connection. The tests were made for the Dardelet Threadlock Corp., New York.



—*Just Issued*

FULL DATA ON COMPARISON OF SUPERHEATED STEAM WITH SATURATED STEAM FOR OIL-WELL DRILLING.

THIS new descriptive booklet deals with a new service for oil-drilling operations and, with the aid of test data actually taken in the field, explains how highly superheated steam, as obtained with Elesco superheaters, speeds up drilling operations, thus increasing capacity and lowering costs.

Two oil-country boilers, equipped with Elesco superheaters, were set up and operated beside two saturated-steam boilers. To obtain a true comparison between superheated steam and saturated steam on the drilling operation, each set of boilers was operated for alternate periods of 24 hours throughout duration of the test of eighteen days. The entire test was conducted under normal drilling operations.

In addition to a full report of the test, the catalog describes and illustrates the Elesco firetube superheater especially designed for oil-country boilers. The Elesco superheater is easily applied, requires no change in operation and does not complicate the boiler arrangement. All the leading manufacturers of oil-country boilers are prepared to include Elesco superheaters with new boilers.

Send for your copy today.

o-o o-o

The following leading boiler manufacturers are prepared to supply oil-country boilers equipped with Elesco superheaters:

The Broderick Company, Muncie, Ind.
Donovan Boiler Works, Inc., Parkersburg, W. Va.
Farrar & Trefts, Inc., Buffalo, N. Y.
Kewanee Boiler Corporation, Kewanee, Ill.
Lucey Manufacturing Corporation, Chattanooga, Tenn.
Oil Well Supply Co., Oil City, Pa.

The Titusville Iron Works Company, Titusville, Pa.
Consult the supply company representing any of these companies on your boiler requirements.

THE SUPERHEATER COMPANY,
60 East 42nd Street,
New York City.

Gentlemen:

Please send me a copy of Bulletin T-20, "The Elesco Superheater for Oil-country Boilers."

Name _____

Position _____

Firm Name _____

Address _____

8-7-30

THE SUPERHEATER COMPANY

60 East 42nd Street, NEW YORK

Peoples Gas Building
CHICAGO

ELESCO

Union Trust Building
PITTSBURGH

A-494

Billions of Bubbles

C&B Safety Loading Equipment

C&B SEALED LEVEL GAUGE

C&B DIFFERENTIAL PRESSURE GAUGE

C&B LOADING HEAD

Saves Time
Conserves Gasoline
Prevents Fires

Profits for the producer any way he figures it.

Ask for Bulletin No. 5

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CONSULTING DESIGNING CONSTRUCTING
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LONG BEACH, CAL.

STEARNS-ROGER MFG. CO., DENVER
MID-CONTINENT AGENCY

Originators of Oil-Froth Absorbers

WILDCAT OPERATIONS IN LOUISIANA-ARKANSAS

(Continued from Page 49)

CLAIBORNE PARISH

El Dorado Chief Oil Co.'s No. 1 Dance, C SW NE, Sec. 27-20-7 ..... S. D. 2,240 ft.
La. G. & F. Co.'s No. 1 Tensas Delta Land Co., 660 ft. N, 1,318 ft. E, SW cor., Sec. 23-6-5 ..... Location.
Leue Oil Co.'s No. 1 Taylor, 1,153 ft. S, 360 ft. W, C, Sec. 16-22-6 ..... T.A. 3,004 ft.
Triangle Drlg. Co.'s No. 1 Hodges et al, 660 ft. S, 660 ft. E, NW cor. NW SW, Sec. 6-19-5 ..... Began drlg. July 26; drlg. 300 ft.

CONCORDIA PARISH

A. C. Glassell's No. 1 Pittsfield Plantation, N 9°, E 1,320 ft., SW cor., Sec. 41-8-10 ..... Blew out between 1,392-1,450 ft.; estimated 1,000,000 ft. gas; bridged; recmtd. 8¼-in. 1,370 ft.; S.D.; T.D. 1,453 ft.
Joe Marr et al's No. 1 Maxwell, C, Sec. 35-3n-8e ..... 8-in. stuck at 1,300 ft; T.D. 2,820 ft.

DE SOTO PARISH

Ark.-La. P. L. Co.'s No. 2 Johnson, 2,144 ft. N, 1,343 ft. W, C, Sec. 7-11-13 ..... Drlg. chalk 1,815 ft.
Joe Burnham et al's No. 1 Mary Hood, 320 ft. W, 201 ft. S, NE cor. SE SE NE, Sec. 3-11-14 ..... S.D. 1,870 ft.
J. W. Clark's No. 1 Tidwell, NW cor. NW, Sec. 22-13-14 ..... Location.
J. W. Clark's (was Sam Gold et al's) No. 1 Platt, 200 ft. S, 200 ft. W, NE cor. SW, Sec. 23-13-14 ..... Rig up.
Gulf Ref. Co.'s No. 1 Dry, 2,390 ft. N, 200 ft. E, SW cor., Sec. 14-11-15 ..... Drlg. shale 2,000 ft.
Bud Harrell's No. 1 Horton, 450 ft. E, 150 ft. N, SW cor., Sec. 4-11-11 ..... S.D. 1,060 ft.
Frank Melat, Inc.'s No. 1 Schryver, 175 ft. E, 175 ft. N, SW cor. NW SW, Sec. 35-14-13 ..... Had 150 ft. oil in hole 2,819 ft; S.D.
Michlouzanna O. & G. Co.'s No. 1 Payne, 410 ft. S, 398 ft. E, NW cor., Sec. 12-11-16 ..... O.W.D.D.; completed by Clark & Melat; milled 6⅝-in. 1,090 ft.; arranging to set 4½-in. and packer on top liner 3,030 ft.; tested dry 2,070 ft.; old T.D. 2,556 ft.
Odell & Lawton's No. 1 Tidwell-Tull, 300 ft. N, 600 ft. E, SW cor. NW, Sec. 11-13-14 ..... Coring 2,628 ft.
Pelham & Bumby's No. 1 Rhodes, C S½ SE, Sec. 32-13-14 ..... S.D. for wtr. 1,850 ft.
Philp et al's No. 1 Talbot, 220 ft. S, 730 ft. W, NE cor. NW NE, Sec. 9-13-13 ..... Derrick.
R. O. Roy's No. 1 Nelson, 660 ft. S, 660 ft. E, NW cor., Sec. 36-15-13 ..... S.D. 2,000 ft.

JACKSON PARISH

El Dorado Chief O. & G. Co.'s No. 1 Sou. Advance Paper Bag Co., 225 ft. N, 275 ft. E, SW cor. SW NE, Sec. 35-15-4 ..... S.D.; C.D. 1,083 ft.

LINCOLN PARISH

Ark. Fuel Oil Co.'s No. 1 Lewis & Co., 300 ft. N, 300 ft. W, SE cor. NW SE, Sec. 26-20-4 ..... D.S. stuck; T.D. 4,187 ft.

MOREHOUSE PARISH

Pelican Nat. Gas Co.'s No. 1 Tensas Delta Land Co., 1,320 ft. N, 660 ft. E, NW cor., Sec. 17-18-6 ..... Location.
Ruston Drlg. Co.'s No. 1 Tucker & Platt, 660 ft. N, 860 ft. W, SE cor. NE, Sec. 8-20-6 ..... Top gas rock 2,436 ft.; D.S. test 2,440-52 ft.; dry; tested S.W. 3,488 ft; drlg. red beds 2,825 ft.

NATCHITOCHES PARISH

W. M. Coats' No. 1 Collins, 730 ft. N, 50 ft. E, C, Sec. 28-9-10 ..... Cored sandy lime; arranging test small S.G. 2,234 ft.
J. W. Cooper et al's No. 1 Cooper, NW SW, Sec. 35-11-10 ..... Derrick.
S. D. McDaniel's No. 2 Clark & Morse, 800 ft. E, 350 ft. N, C, Sec. 23-5-6 ..... Tested 1,000,000 ft. gas and S.W. 3 ft.; S.D. for orders; T.D. 2,526 ft.
Robeline O. & G. Co.'s No. 1 Winn, 558 ft. N, 348 ft. E, SW cor. SE, Sec. 7-8-9 ..... S.D. 1,600 ft.

RAPIDES PARISH

Ayers Bros.' No. 1 Wickliff, 2,790 ft. N, 150 ft. E, SW cor., Sec. 9-5n-2e ..... S.D. for wtr. 3,310 ft.

RED RIVER PARISH

E. C. Lucas' No. 1 La. Pecan Co., Sec. 26-13-11 ..... Cmtd. 8-in. 785 ft.
Geo. L. Pace et al's No. 1 Clarkson, 200 ft. S, 200 ft. E, NW cor. NE, Sec. 30-12-9 ..... Cored Nacatoch; S.O. 1,205 ft.

RICHLAND PARISH

Austin & McDonald's No. 1 Hunt, 594 ft. N, 660 ft. E, SW cor., Sec. 13-17-5 ..... Cmtd. 12½-in. 200 ft.
Austin & McDonald's No. 2 Millsaps, SW cor., Sec. 17-17-6 ..... Waiting orders; T.D. 2,657 ft.
Austin & McDonald's No. 3 Millsaps, 1,980 ft. S, 660 ft. E, NW cor., Sec. 16-17-6 ..... Tested S.W.; W.O. 2,477 ft.
Austin & McDonald's No. 4 Millsaps, NW cor., Sec. 16-17-6 ..... Location.
Austin & McDonald's No. 5 Millsaps, 2,640 ft. N, 1,320 ft. W, SE cor., Sec. 8-17-6 ..... Derrick.
W. C. Feazel's No. 1 Landrum, 620 ft. N, 4,573 ft. E, SW cor., Sec. 6-16-7 ..... Derrick.
Island Gas Co.'s No. 1 Noe, 1,902 ft. N, 660 ft. W, SE cor., Sec. 3-16-5 ..... Rig up.
Palmer Corp.'s No. 1 Seubert, 1,356 ft. N, 88° 35' W, 660 ft., SE cor., Sec. 1-16-5 ..... Drlg. shale and boulders 2,350 ft.

SABINE PARISH

Ark.-La. P. L. Co.'s No. 1 Whitney, 660 ft. S, 660 ft. E, C, Sec. 28-10-14 ..... D.S. test 3,091-3,106 ft; small show oil, gas and S.W; arranging to deepen.
Boone, trustee's No. 1 J. B. Hill, NE, Sec. 4-6-11 ..... (No check); derrick.
LeGrand Oil Co., Inc.'s No. 1 J. W. Hale, 200 ft. N, 200 ft. E, SW cor. NE NW, Sec. 1-7-13 ..... Location.
Lohman & Walker's No. 1 Hubley, 330 ft. N, 330 ft. W, SE cor. SE NE, Sec. 21-7-11 ..... Small gas blowout in sand 1,311-13 ft; arranging to cmt. 8-in. 1,313 ft.
Longoria et al's No. 1 Belton, 330 ft. S, 330 ft. E, C, NE, Sec. 31-9-13 ..... Rig up.
Loring Oil Co.'s No. 1 Peavy-Wilson Lbr. Co., 200 ft. S, 330 ft. W, NE cor. SW NE, Sec. 21-6-13 ..... D.S. test 4,470-4,519 ft; 2 fourbles S.W; arranging to deepen.
Lohman et al's No. 1 Wyatt Lbr. Co., 150 ft. S, 330 ft. E, NW cor. NE SW, Sec. 18-4-11 ..... Rig up.
Magnolia Pet. Co.'s No. 1 Glauque, 484 ft. N, 390 ft. E, SW cor. NW SW, Sec. 26-7-14 ..... Began drlg. July 26; drlg. 147 ft.
J. C. McDaniel & Lieber's No. 1 Batson, 675 ft. N, 318 ft. E, SW cor. SE, Sec. 16-13-12 ..... Show oil; bailed dry; W.O. 2,526 ft.
Paramount O. & G. Co.'s No. 1 Woolems, 330 ft. N, 330 ft. W, SE cor. NE NW, Sec. 11-8-12 ..... S.D. 1,656 ft.
Pelican Nat. Gas Co.'s No. 3 La. Long Leaf Lbr. Co., 200 ft. S, 200 ft. W, NE cor. SW, Sec. 4-7-11 ..... Drlg. 1,668 ft.
Pelican Nat. Gas Co.'s No. 3 Sabine Lbr. Co., 200 ft. S, 200 ft. W, NE cor. SE NW, Sec. 6-7-11 ..... Cmtd. 12-in. 103 ft; drlg. 1,506 ft.
D. H. Riddick's No. 1 Scretchfield, 400 ft. E, 400 ft. N, SW cor. NW SE, Sec. 18-9-12 ..... S.D. 3,280 ft.
H. T. Stacey et al's No. 1 Polly, NE cor. NE NE, Sec. 18-8-12 ..... Rig up.

TENSAS PARISH

A. R. Willis et al's No. 1 Currey, 1,320 ft. S, 1,320 ft. E, NW cor., Sec. 39-11-12 ..... Drlg. shale and sand 2,285 ft.

WEBSTER PARISH

J. P. Evans et al's No. 1 Crichton Co., NE cor. NW NE, Sec. 31-18-8 ..... Rig up.

ARKANSAS
ASHLEY COUNTY

J. D. Marcum Co.'s No. 1 McGarry, 300 ft. W, 100 ft. S, C, Sec. 10-19-4 ..... D.S. test 3,555 ft.; S.W.; plugging back for retest.

CALHOUN COUNTY

Tidal Oil Co.'s No. 1 Freeman-Smith Lbr. Co., 150 ft. C S line, NE NW, Sec. 3-16-14 ..... D.S. test 2,456-2,506 ft.; S.W. 2,488-2,506 ft; dry; S.W. 2,534-49 ft; cored S.W. sand 2,843 ft; drlg. 2,935 ft.

CLEBURNE COUNTY

Cosden Oil Co. of Ark.'s No. 1 Donophan, 100 ft. S, 660 ft. E, NW cor. SW SE, Sec. 19-9-10 ..... S.D. 3,875 ft.

Donnelly-Craver et al's No. 1 Donophan Lbr. Co., SE cor. NW, Sec. 33-11-9 ..... S.D. for wtr. 1,575 ft.

COLUMBIA COUNTY

S. Y. Dorfman et al's No. 1 Merritt, 923 ft. S, 160 ft. W, NE cor. SE NW, Sec. 25-19-22 ..... Cmtd. 12½-in. 165 ft; drlg. 650 ft.

DREW COUNTY

McClintock & Goodka's No. 1 Ogles, 920 ft. W, 400 ft. S, NE cor., Sec. 35-13-5 ..... T.A. 2,625 ft.

FRANKLIN COUNTY

Red Bank Oil Co.'s No. 1 Edtin, SW cor., Sec. 33-10-26 S.D. 2,399 ft; drlg. wtr. well.

GARLAND COUNTY

Givens et al's No. 1 Garrett, 660 ft. S, 660 ft. W, C, Sec. 1-3-19 ..... Drlg. sandy lime 3,617 ft.

HOT SPRING COUNTY

Anisman et al's No. 1 Hinson est., NE NE, Sec. 19-4-16 .. Location.

J. R. Lockhart's No. 1 Cunningham, 285 ft. S, 285 ft. W, NE cor., Sec. 11-5-16 (reported in Grant County in error) ..... Derrick.

LAFAYETTE COUNTY

Crawford Drlg. Co.'s No. 1 Vaughn, 200 ft. S, 200 ft. W, NE cor. SE NE, Sec. 25-19-25 ..... Rig up.

LINCOLN COUNTY

B. F. Thompson, trustee's No. 1 McGhee, 330 ft. S, 150 ft. W, C, Sec. 8-8-7 ..... Rigging up.

LITTLE RIVER COUNTY

A. L. Buck's No. 1 Greason, NW NW, Sec. 25-12-32 .... S.D. 2,502 ft.

LOGAN COUNTY

J. H. Flowers' No. 1 J. H. White, Sec. 13-6-26 ..... U.R. 5 3/16-in. 3,570 ft.; T.D. 3,610 ft.

MADISON COUNTY

J. W. Baxter's No. 1 Hallem, C NE SW, Sec. 17-16-26 .... S.D. 540 ft.

MILLER COUNTY

Lenz et al's No. 1 G. W. Johnson, 400 ft. S, 400 ft. W, NE cor. SW, Sec. 24-15-26 ..... T.D. 2,849 ft; estimated 65 bbls. arranging to set tubing.

OUACHITA COUNTY

Anderson & Wimmer's No. 1 Buck, Sec. 7-15-7 ..... Sidetracking D.S.; T.D. 2,735 ft.

Belmont et al's No. 1 Buck, SE cor. SE SW, Sec. 16-15-17. Cmtd. 12½-in. 120 ft.

A. B. Turner, trustee's No. 1 Dave Brown, 220 ft. N, 220 ft. E, SW cor., Sec. 23-15-18 ..... Rig up.

PIKE COUNTY

E. R. Henderson's No. 1 Tilyou, 660 ft. W, 500 ft. S, NE cor. NE SE, Sec. 26-8-14 ..... Location.

POPE COUNTY

Ark.-La. P. L. Co.'s No. 1 J. E. Moore, 330 ft. N, 330 ft. E, SW cor. SE NE, Sec. 16-9-21 ..... Drlg. hard shale 900 ft.

Cosden Oil Co.'s No. 1 Mo. Pac. R.R., 660 ft. N, 660 ft. E, SW cor. NW SE, Sec. 13-9-19 ..... Drlg. hard sand 4,864 ft.

SCOTT COUNTY

Heavener O. & G. Co.'s No. 1 Riser, Sec. 36-4-26..... Straightening hole; T.D. 1,530 ft.

SEBASTIAN COUNTY

W. M. Greeson's No. 1 Spears, Sec. 9-7-29 ..... Tested S.W. 3,515 ft; W.O.

Mansfield Gas Co.'s No. 14 Fee, Lot 10, Sec. 1-4-31..... S.D. for wtr. 380 ft.

Ozark Nat. Gas Co.'s No. 10 Weaver, 660 ft. N, 660 ft. W, SE cor. SE NE, Sec. 27-8-30 ..... Straightening hole; T.D. 2,640 ft.

UNION COUNTY

S. B. Hickman's No. 1 Hogg, 330 ft. S, 150 ft. E, NW cor. SE SE, Sec. 35-16-17 ..... Dry 1,987-2,079 ft.; fishing 2,157 ft.

Marine Oil Co.'s No. 4-A Thompson, 330 ft. N, 330 ft. W, SE cor. SW NE, Sec. 10-18-13 ..... Drlg. lime 3,285 ft.

Modisette Drlg. Co.'s No. 4 Union Sawmill, 330 ft. W, 300 ft. N, SE cor., Sec. 14-18-14 ..... Location.

South El Dorado Oil Co.'s No. 1 Traylor, 330 ft. N, 138 ft. W, SE cor. NW NE, Sec. 9-19-15 ..... W.O.S.R.; 700 ft. fluid; T.D. 2,186 ft.

VAN BUREN COUNTY

Glenn Kohle et al, trustee's No. 1 Scalan, 200 ft. S, 200 ft. W, NE cor. SE NW, Sec. 5-19-13 ..... S.D. 50 ft.

WASHINGTON COUNTY

Delbert & Graves' No. 1 Cunningham, Sec. 14-15-32..... S.D.; W.O. 602 ft.

C. H. Willoughby's No. 1 Jones, Sec. 34-16-30 ..... S.D; W.O. 1,650 ft.

Lincoln Leaseholding Synd.'s No. 1 Lincoln, Sec. 30-15-32. U.R. 8-in. to T.D. 1,500 ft.

H. H. Taylor et al's No. 1 Runny, C NE SW, Sec. 1-13-19. S.D. for wtr. 700 ft.

YELL COUNTY

Tegmeir & Luckett's No. 1 Falcon, Sec. 36-7-21 ..... Sidetracking 5 3/16-in. 4,120 ft.; T.D. 4,160 ft.

EAST TEXAS
BOWIE COUNTY

Lee Timberlake's No. 1 Tidwell, 2,800 ft. N, 300 ft. W, SE cor., Jos. Eskell Sur. ..... S.D. repairs; 2,330 ft.

CAMP COUNTY

McDonald Bros.' No. 1 Tillery, 150 ft. E, 450 ft. S, NW cor. 127-ac. tract, in J. H. Murphy Sur. ..... Location.

Rogers et al's No. 1 Enfelt, R. M. Montgomery Sur. .... T.A. 3,045 ft.

CASS COUNTY

Phillips Pet. Co.'s No. 1 J. R. Olds, 300 ft. N, 170 ft. E, SW cor., J. A. Stephenson Sur. ..... Rig up.

MARION COUNTY

W. D. Chew's No. 1 Fee, 2,350 ft. W, 1,275 ft. N, SE cor., W. J. Hamilton Sur. ..... Drlg. hard shale 2,400 ft.

P. E. Hussey's No. 1 A. A. Trammell, Chas. Lockhart Sur. ..... Drlg. shale 805 ft.

RED RIVER COUNTY

D. M. Buffington's No. 1 Hossler, E. Hughhart Sur..... S.D. 2,865 ft.

Johnson Pet. Co.'s No. 2 Randolph, Edw. Dean Sur..... Swedging 2 jts. collapsed 8-in.; arranging cmtd. 6⅝-in. and packer 2,182 ft.

SABINE PARISH

Benedum & Trees Oil Co.'s No. 1 Nona Mills Lbr. Co., Jas. Mason Sur. ..... Derrick.

SHELBY COUNTY

Chapperall Oil Co.'s No. 2 Holt, Matthew Moore Sur..... Coring hard lime 5,350 ft.

MISSISSIPPI
ADAMS COUNTY

A. C. Glassell et al's No. 1 Artonish, 75 ft. S, 75 ft. W, NE cor., Sec. 29-8n-2w ..... Began drlg. July 2; cmtd. 12½-in. 246 ft.

ALCORN COUNTY

Alcorn Pet. Co.'s No. 1 Matthews, SE cor., Sec. 14-2s-7e. Fishing 6-in. and tools 2,392 ft.; T.D. 2,735 ft.

CHICKASAW COUNTY

Hightower & Golson's No. 1 Flemming, NE cor., Sec. 20-13-3 ..... Fishing 8¼-in. csg. 1,414 ft.

HINDS COUNTY

Oscar Brown's No. 1 Riverside (formerly Hennessee et al's), SE cor. SE SW, Sec. 23-16-5 ..... Set 12⅜-in. 30 ft.; S.D. 1,050 ft.

Cane River Oil Co.'s No. 1 Lufkin, Sec. 15-5-1e ..... Cmtd. 6⅝-in. top chalk 2,465 ft.; T.D. 2,467 ft.

Capital O. & G. Co.'s No. 1 Brown, SW SE, Sec. 28-6-1e.. Began drlg. July 20; cmtd. 10-in. 280 ft.

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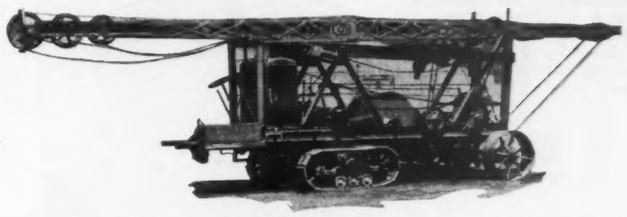

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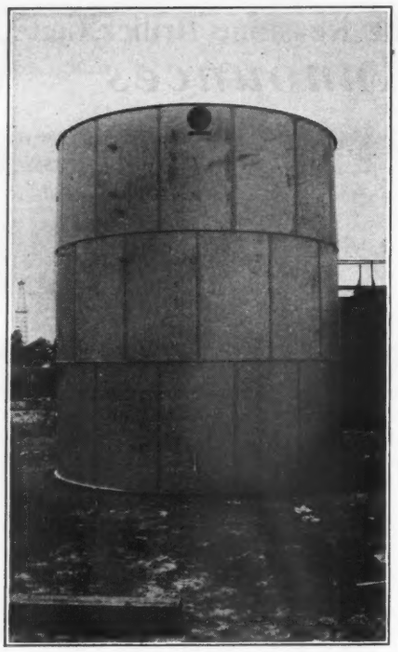

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MALONEY TANKS

Capital O. & G. Co.'s No. 1 Clark, Sec. 10-5-1e ..... Began drlg. July 21.
Dome Oil Co.'s No. 1 Elton, NE cor. SE SW, Sec. 5-4-1e.. Cmtd. 6-in. 2,436 ft.
Interior Oil Co.'s No. 1 Belhaven Heights, 1,165 ft. W, 614 ft. S, NE cor., Sec. 2-5-1e ..... Derrick.
Jackson Oil Co.'s No. 1 Central Cotton Oil Co., NW cor. SW NW, Sec. 3-5-1e ..... Derrick.
Jackson O. & G. Co.'s No. 1 Capital Land & Inv. Co., Sec. 29-6-1e ..... Drlg. 2,179 ft.
Love Bros.' (was Love O. & G. Co.'s) No. 1 Bridges-Hilzim, 870 ft. N, 920 ft. W, SE cor., Sec. 35-6-1e.... S.D. 240 ft.
Love O. & G. Co.'s No. 1 Gordon, SW cor. SW NW, Sec. 8-5-1e ..... Cmtd. 6⅝-in. 2,448 ft.; drlg. plug.
Love Pet. Co.'s (was Love O. & G. Co.'s) No. 2 Mendoza, NE cor., Lot 2, Sec. 12-5-1e ..... Began drlg. July 16; cmtd. 15½-in. 47 ft.; 10-in. 756 ft.
Marine O. & G. Co.'s No. 1 Country Club, NW cor., Sec. 31-6-1e ..... Ratholing at 2,493 ft. in Wilcox.
Ohio Oil Co.'s No. 1 School, SE cor. N½ NE NE, Sec. 16-5-1e ..... Drlg. Wilcox 1,900 ft.
Mrs. Reeder et al's No. 1 State, SE cor. NW NW, Sec. 25-6-1e ..... W.O.; T.D. 2,905 ft.
Tri-State O. & G. Co.'s No. 1 Wilson, SW cor. SE NE, Sec. 23-6-1e ..... Derrick.
J. A. Weir et al's No. 1 Holliday & Ross, NW SE, Sec. 8-6-2e ..... S.D. wtr. 1,295 ft.

HUMPHRIES COUNTY

E. S. Steele et al's No. 1 C. B. Box, SE cor. SE NE, Sec. 25-14-4w ..... Set 12½-in. 60 ft.; S.D.

LAUDERDALE COUNTY

Lauderdale O. & G. Co.'s No. 1 Lackey, 990 ft. S and E, NW cor. NE, Sec. 2-7-16 ..... Tested S.W. 3,252 ft.; S.D. 3,420 ft.
Meridian O. & G. Co.'s No. 1 Hauser, Sec. 33-8-18 ..... S.D.; W.O.; sandy shale 2,826 ft.
J. R. Smith Oil Co.'s No. 1 C. F. Craig, Sec. 2-16-14 ..... Derrick.

LAFAYETTE COUNTY

Banks-Goode et al's No. 1 May, 113½ rds. S, 26 rds. E, NW cor. SW, Sec. 22-10-1w ..... Derrick.

LINCOLN COUNTY

Lincoln O. & G. Co.'s No. 1 Pat Case, NE cor. NE, Sec. 21-3-6 ..... S.D.; W.O. 2,231 ft.

MADISON COUNTY

Barney Kennedy et al's No. 1 Raymond, 300 ft. E, 1,800 ft. N, SW cor., Sec. 32-7-2e ..... Rig up; W.O.

MONROE COUNTY

Amory Dev. Co.'s No. 1 Bourland, Sec. 2-13-19 ..... S.D. 2,912 ft.; bailer lost in hole.
Amory Pet. Co.'s No. 1 Hall, Sec. 8-13-19 ..... Shot 2,402-18 ft.; small S.O.; arranging to shoot 2,387-95 ft.
Park Bowser et al's No. 1 Cowart, second hole, Sec. 2-12-19 ..... S.D. 30 ft.

RANKIN COUNTY

Gulf Ref. Co.'s No. 1 Rainey, NW NW, Sec. 13-5-1e ..... Cmtd. back to 2,500 ft.; drlg. plug; no gauge of volume; rock pressure 450 lbs.; old T.D. 3,607 ft.
R. A. Moore et al's No. 1 Interior Lbr. Co., Sec. 28-6-1e.. S.D. 900 ft.
Interior Oil Co.'s No. 1 Moore, 660 ft. N, 660 ft. W, SE cor. NW NW, Sec. 28-6-2e ..... S.D. 900 ft.
Jackson O. & G. Co.'s No. 1 Patton, 330 ft. N, 330 ft. W, SE cor. SE NW, Sec. 17-5-1e ..... Began drlg. July 16; S.D. bldg. wtr. line.
Ohio Oil Co.'s No. 1 Payne, NW cor. SE NE, Sec. 12-5-1e ..... Location.
Pearl River O. & G. Co.'s No. 1 Marter, 900 ft. N, 200 ft. W, SE cor. SW NW, Sec. 12-5-1e ..... Estimated 10,000,000 ft. gas and flowing sulphur wtr. by heads; 6 ft. chalk; T.D. 2,478 ft.

WARREN COUNTY

El Dorado Oil Co.'s No. 1 Dornbush, Sec. 8-18-15..... S.D. 2,475 ft.; 2,350 ft. D.S. in hole; W.O.

WILKINSON COUNTY

A. C. Glassell et al's No. 1 Stowers, 31.4 chains W, 27.2 chains S, NE cor., Sec. 29-8-2w ..... Cmtd. 12½-in. 465 ft.

YALOBUSHA COUNTY

Carter Oil Co.' and J. W. Collett's No. 1 Blackmur, 330 ft. S, 990 ft. W, Sec. 14-11-4 ..... Fishing slip; T.D. 2,215 ft.

YAZOO COUNTY

Amerada Pet. Corp.'s No. 1 Doherty, SW SW, Sec. 24-12-2 ..... Drlg. sandy lime 5,133 ft.

ALABAMA
LAMAR COUNTY

Griggs & Knapp's No. 1 Wefel, Sec. 25-12-14 ..... T.A. 1,740 ft.

LAUDERDALE COUNTY

A. D. Morton et al's No. 10 O'Neal est., Sec. 8-2s-13w.... Cmtd. 12½-in. 125 ft.; drlg. hard lime 905 ft.

MARION COUNTY

Hobson et al's No. 1 John Clark, SE. Sec. 29-11-14 ..... Derrick pattern.

WASHINGTON COUNTY

S. A. Hobson's No. 1 Hobson Bros., Sec. 9-8-2 ..... S.D.; W.O.; flow at 1,450 ft.
S. A. Hobson's No. 1 Wilson, Sec. 27-7-1 ..... Fishing bailer; T.D. 881 ft.
Oscar Brown's No. 2 Land & Cotton Co., Sec. 25-3-2w.... Drlg. 700 ft.

LOUISIANA-ARKANSAS PROVEN AREAS

(Continued from Page 49)

The Texas Co.'s No. 15 Wilkinson, 990 ft. S, 330 ft. W, NE cor., Sec. 36-23-12 ..... Derrick.
Tippett Drlg. Co.'s No. 3 Holmes, 330 ft. N, 330 ft. E, SW cor. NE NW, Sec. 36-23-12 ..... 300 ft. oil in hole; waiting on power; T.D. 3,180 ft.
Woodley et al's No. 1 Roberson, 330 ft. N, 330 ft. W, SE cor. SW NE, Sec. 22-23-12 ..... Surface csg. collapsed; W.O.; T.D. 1,500 ft.

BOSSIER PARISH—SLIGO

La. Gas & Fuel Co.'s No. 4 Skannal, 3,300 ft. E, 660 ft. S, NW cor., Sec. 13-17-12 ..... Derrick.
La. G. & F. Co.'s No. 7 Thigpen & Herold, 660 ft. N, 660 ft. E, SW cor., Sec. 19-17-11 ..... Cmtd. bottom to cut off S.W. 3,027 ft.
Woodley Pet. Co.'s No. 2 Schuler, C SE NW, Sec. 13-17-12 ..... Began drlg. July 25; cmtd. 10-in. 147 ft; drlg. 600 ft.

CADDO PARISH—GREENWOOD

Calatex O. & G. Co.'s No. 1 Edgar, 1,460 ft. S, 1,900 ft. E, NW cor., Sec. 17-16-16 ..... Location.
Calatex O. & G. Co.'s No. 1 McAnn-Alfred, 1,810 ft. S, 970 ft. E, NW cor., Sec. 17-16-16 ..... Location.
Calatex O. & G. Co.'s No. 1 Hudson, 2,395 ft. N, 660 ft. E, SW cor., Sec. 8-16-16 ..... Derrick.
Calatex O. & G. Co.'s No. 2 Taylor-Trosper, 45 ft. N, 1,220 ft. E, SW cor., Sec. 8-16-16 ..... Cmtd. 10-in. 80 ft; drlg. 2,000 ft.

CADDO PARISH—MOORINGSPORT

Falcon Oil Co.'s No. 1 Miller, 1,020 ft. N, 1,320 ft. E, SW cor., Sec. 29-20-15 ..... Drlg. 1,600 ft.
Gulf Ref. Co.'s No. 1 Leonard Fee, 3,623 ft. N, 2,486 ft. E, SW cor., Sec. 29-20-15 ..... Cmtd. 6⅝-in. 2,025 ft; T.D. 3,080 ft.
The Texas Co.'s No. 5 Leonard Fee, 2,440 ft. W, 200 ft. S, NE cor., Sec. 29-20-15 ..... Began drlg. July 27; cmtd. 13¾-in. 44 ft; drlg. 1,065 ft.

CADDO PARISH—OIL CITY

The Texas Co.'s No. 73 Levee Board, 1,642 ft. E, 780 ft. N, SW cor. SW SE, Sec. 27-21-16 ..... Location.

CADDO PARISH—PINE ISLAND

Shreveport Oil Corp.'s No. 6 Hicks et al, 880 ft. N, 1,360 ft. W, SE cor. NE NW, Sec. 32-21-15 ..... Cmtd. 6-in. 2,110 ft.

DE SOTO PARISH—HOLLY

Standard Oil Co.'s No. 2 Dowling Bros., 330 ft. S, 330 ft. W, NE cor. SW NE, Sec. 5-13-13 ..... Rig up.

LA SALLE PARISH—URANIA

W. O. Clark's No. 1-B Russell, Sec. 25-10-1e ..... Cmtd. 6⅝-in. 1,535 ft.; W.O.S.R. 1,550 ft.

Montugu Oil Co.'s No. 8 Zenoria Lbr. Co., 710 ft. S, 250 ft. W, NE cor., Sec. 10-9-1e ..... Cmtd. 6⅝-in. 1,499 ft.; W.O.S.R.; 700 ft. oil; 700 ft. S.W.; T.D. 1,510 ft.

MOREHOUSE PARISH

Bahan & Bahan's No. 4 Feazel, 990 ft. W, 330 ft. S, NE cor., Sec. 2-20-4 ..... Location.

Grecian Bend Gas Co.'s No. 1 J. D. Sandidge et al, 660 ft. W, 1,980 ft. N, SE cor. NE, Sec. 2-20-4 ..... Location.

J. S. Herkness' No. 12 Bowles, 3,392 ft. E, 3,300 ft. S, NW cor., Sec. 18-20-5 ..... Drlg. 3,500 ft.

Industrial Gas Co.'s No. 2 Fee, 660 ft. E, 660 ft. S, NW cor. NE, Sec. 3-20-4 ..... Began drlg. July 25; cmtd. 12½-in. 123 ft.

La. G. & F. Co.'s No. 1 Archie, 627 ft. S, 1,957 ft. E, NW cor. SW, Sec. 22-20-4 ..... Cmtd. 6-in. 2,093 ft.

La. G. & F. Co.'s No. 26 Crossett, 645 ft. E, 574 ft. S, NW cor., Lot 9, Sec. 33-21-5 ..... Cmtd. 6-in. 2,340 ft.

Ouachita Nat. Gas Co.'s No. 6 Sandidge, 732 ft. S, 1,209 ft. W, NE cor. SE, Sec. 23-20-4 ..... Derrick.

Southern Carbon Co.'s No. 56 Fee, 660 ft. S, 660 ft. E, NW cor. NW, Sec. 15-20-4 ..... Cmtd. 6-in. 2,091 ft.

OUACHITA PARISH

Ark.-La. P. L. Co.'s No. 2 Potts, 1,560 ft. S, 1,940 ft. W, NE cor., Lot 1, NW, Sec. 30-19-4 ..... Drlg. 1,635 ft.

Amalgamated Co.'s No. 1-B Kate Cole, 660 ft. N, 660 ft. E, SW cor. NE SW, Sec. 25-20-4 ..... Rig up.

Carbon Cons., Inc.'s No. 5 Guthrie (was United Oil & Nat. Gas Co.'s No. 5 Guthrie), 6,634 ft. N, 7,078 ft. W, cor. Secs. 49, 25 and 26, in Sec. 50-20-4 ..... Drlg. 1,558 ft.

Greenwood Production Co.'s No. 1 J. E. Morris, 3,923 ft. E, 660 ft. S, SW cor. NW NW, Sec. 36-19-3 ..... Rig up.

Jordan Drlg. Co.'s No. 7 Cole, 265 ft. S, 1,459 ft. W, NE cor., Sec. 49, in Sec. 50-18-4 ..... Location.

Jordan Drlg. Co.'s No. 1 J. P. Parker, 950 ft. N, 485 ft. W, cor. Secs. 41, 9 and 16, in Sec. 41-18-4 ..... Location.

Jordan Drlg. Co.'s No. 1 School, 216 ft. S, 244 ft. W, NE cor. NW, Sec. 16-18-4 ..... Location.

La. G. & F. Co.'s No. 3 Breard, S 9° 734 ft., S 81° E 594 ft., NW cor., Sec. 44-18-4 ..... Arranging test; T.D. 2,200 ft.

La. G. & F. Co.'s No. 4 Breard, S 9°, W 966 ft., S 81°, E 451 ft., NW cor., Sec. 43-18-4 ..... Location.

Pipes & Mack's No. 1 Union Gas Products Co., Inc., 1,598 ft. W, 297 ft. N, SE cor. SW, Sec. 7-18-5 ..... Tested dry 2,460 ft.; W.O. 2,500 ft.

Pipes & Mack's No. 2 Union Gas Products Co., 296 ft. W, 528 ft. N, SE cor. SW, Sec. 7-18-5 ..... Location.

United Carbon Co.'s No. 6 Spade, 1,180 ft. S, 140 ft. E, NW cor., Sec. 27-19-4 ..... Location.

United O. & N. G. Co.'s No. 2 Cole, 660 ft. S, 594 ft. E, C, Sec. 26-20-4 ..... Derrick.

RICHLAND PARISH

W. C. Feazel's No. 1 R. B. Simon, 2,406 ft. W, 2,020 ft. S, NE cor., Sec. 11-16-6 ..... Rig moved; derrick.

Franklin O. & G. Co.'s No. 1 Thompson, 660 ft. N, 165 ft. W, SE cor. NE, Sec. 14-16-6 ..... Location.

Hope Prod. Co.'s No. 1 A. H. Brown, 1,932 ft. N, 1,009 ft. W, SE cor., Sec. 22-16-6 ..... Cmtd. 6-in. 2,285 ft.

Hope Prod. Co.'s No. 1 J. E. Duff, 660 ft. N, 1,980 ft. W, SE cor., Sec. 15-16-6 ..... Rig up.

International Gas Prod. Co.'s No. 1 Minnie LaGrone, 769 ft. N, 858 ft. E, SW cor., Sec. 7-16-7 ..... Location.

La. Gas & Fuel Co.'s No. 1 Etheridge, 1,412 ft. S, 770 ft. E, NW cor. NE, Sec. 28-17-6 ..... Location.

La. G. & F. Co.'s No. 1-C McCoy, 872 ft. W, 1,749 ft. N, SE cor., Sec. 8-16-6 ..... Arranging test; T.D. 2,450 ft.

Northern La. Nat. Gas Co.'s No. 2 J. H. Hemler, 660 ft. S, 1,995 ft. W, NE cor., Sec. 11-16-6 ..... Began drlg. July 26; cmtd. 12½-in. 182 ft; drlg. 535 ft.

Northern La. Nat. Gas Co.'s No. 3 L. R. Hemler, 1,990 ft. E, 663 ft. N, SW cor. NW, Sec. 23-16-6 ..... Cmtd. 9-in. 881 ft.

Northern La. Nat. Gas Co.'s No. 5-B McCoy, 1,650 ft. S, 660 ft. W, NE cor., Sec. 17-16-6 ..... Location.

Northern La. Nat. Gas Co.'s No. 1 McKay, 681 ft. W, 559 ft. N, SE cor. SW, Sec. 22-16-6 ..... Location.

Palmer Corp.'s No. 1-B Boykin, 177 ft. S, 787 ft. E, C, Sec. 33-17-6 ..... Derrick.

Palmer Corp.'s No. 1 Brown, 1,320 ft. S, 659 ft. W, NE cor. NW NE, Sec. 27-16-6 ..... Cmtd. 6-in. 2,300 ft.

Palmer Corp.'s No. 1 Hill, 1,320 ft. S, 660 ft. E, NW cor. SW, Sec. 31-16-6 ..... Rig up.

Richland Prod. Co.'s No. 1 Hale, 660 ft. S, 660 ft. E, NW cor. NE, Sec. 22-16-16 ..... Cmtd. 9-in. 909 ft; drlg. 2,250 ft.

Southern Carbon Co.'s No. 1-B Hallock, 1,622 ft. N, 990 ft. W, SE cor. NW, Sec. 1-16-6 ..... Began drlg. June 12; cmtd. 12-in. 185 ft., 8-in. 865 ft.

Southern Carbon Co.'s No. 1-B Hemler, 660 ft. N, 1,435 ft. E, SW cor., Sec. 1-16-6 ..... Began drlg. July 23; cmtd. 12-in. 185 ft; 8-in. 902 ft.

Southern Carbon Co.'s No. 2-C M. L. McCoy, 1,880 ft. N, 5,024 ft. E, SW cor., Sec. 1-16-6 ..... Location.

Southern Carbon Co.'s No. 5 F. B. and E. A. Sartor, 1,156 ft. E, 531 ft. S, NW cor. SW, Sec. 19-16-6 ..... Cmtd. 6-in. 2,300 ft; drlg. 2,390 ft.

Southern Carbon Co.'s No. 6 F. B. and E. A. Sartor, 2,640 ft. N, 2,03 ft. W, SE cor., Sec. 24-16-5 ..... Location.

Southern Carbon Co.'s No. 1-C T. R. Sartor, 660 ft. S, 660 ft. W, NE cor., Sec. 29-16-6 ..... Drlg. 2,430 ft.

Southern Carbon Co.'s No. 1 H. L. Thomason, 1,980 ft. S, 665 ft. E, NW cor., Sec. 11-16-6 ..... Drlg. gumbo 1,330 ft.

Southern Carbon Co.'s No. 1-B Thomason et al, 2,310 ft. W, 100 ft. S, NE cor., Sec. 23-16-6 ..... Cmtd. 9-in. 876 ft.

Southern Carbon Co.'s No. 1-C Thomason, 1,980 ft. N, 1,400 ft. W, SE cor., Sec. 14-16-6 ..... Location.

Southern Carbon Co.'s No. 1-D Thomason, 1,320 ft. S, 660 ft. W, NE cor., Sec. 31-16-6 ..... Rig up.

United Carbon Co.'s No. 1 Boise, 1,320 ft. W, 660 ft. N, SE cor., Sec. 28-16-6 ..... Began drlg. July 27; cmtd. 12-in. 189 ft.

United Carbon Co.'s No. 1 R. B. McGowan, 665 ft. E, 660 ft. S, NW cor. SW, Sec. 16-17-6 ..... Cmtd. 6-in. 2,285 ft.

United Carbon Co.'s No. 1-A J. M. Thomason, 2,032 ft. N, 3,338 ft. W, SE cor., Sec. 22-16-6 ..... Began drlg. July 26; cmtd. 12-in. 190 ft.

SABINE PARISH—PLEASANT HILL

Ark. Fuel Oil Co.'s No. 14 Logan, 1,035 ft. N, 241 ft. W, C, Sec. 33-10-12 ..... Cmtd. 6⅝-in. 3,122 ft.

F. A. Bartlett, Jr.'s No. 1 Logan, 200 ft. S, 200 ft. E, NW cor., Sec. 27-10-12 ..... Began drlg. July 13; cmtd. 12-in. 110 ft.

J. M. Bridges, trustee's No. 1 Cook Land Co., Sec. 34-10-12 ..... Drlg. 2,430 ft.

Bridges-Clark Oil Co.'s No. 2 J. W. Guy, 330 ft. S, 330 ft. W, NE cor. SE SE, Sec. 33-10-12 ..... W.O.S.R. 3,194 ft.

A. C. Glassell's No. 1 Logan Oil Co., 300 ft. E, C, Sec. 23-10-13 ..... Rig up.

SABINE PARISH—ZWOLLE

Central Pet. Co.'s No. 1 Baptist Church (was No. 1 Wall), Zwolle Townsite in Sec. 31-8-12 ..... Bailed dry; W.O. 2,590 ft.

Tom Davis' (was T. D. Allison's) No. 1 Holliday, Sec. 31-8-12, Zwolle Townsite ..... S.D. wtr. 1,350 ft.

Glassell & Merren's No. 1 Thomas, Lot 13, Blk. 3, Zwolle Townsite, Sec. 31-8-12 ..... Oil show; S.D. 2,600 ft.

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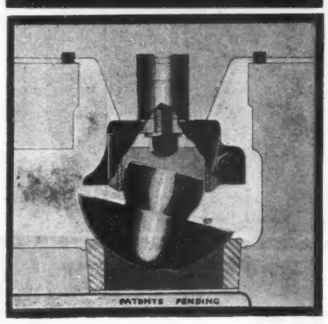

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LOS ANGELES, CALIF.

F. M. Hood's No. 1-B (was No. 2) Winston, 700 ft. E, 425 ft. S, NW cor., Sec. 31-8-12, Zwolle Townsite....S.D. 1,065 ft.
Ab Jones et al's No. 1 Ferguson, 330 ft. N, 330 ft. W, SE cor. NE SW, Sec. 33-8-12 ....Rig up.
Lide et al's No. 3 Sabine Lbr. Co., 300 ft. N, 360 ft. E, SW cor. NE SE, Sec. 31-8-12 ....Top marl 2,166 ft.; top chalk 2,169 ft.; cmtd. 6⅝-in. 2,167 ft.; T.D. 2,174 ft.

Loring Oil Co.'s (formerly Benedum & Trees Oil Co.'s) No. 4 Bowman-Hicks, 330 ft. N, 330 ft. W, C, Sec. 34-8-12 ....T.A. 2,669 ft.
Loring Oil Co.'s (formerly Benedum & Trees Oil Co.'s) No. 5 Bowman-Hicks, 900 ft. S, 1,400 ft. W, C, Sec. 34-8-12 ....T.A. sandy lime 4,176 ft.
Loring Oil Co.'s No. 8 Bowman-Hicks, 330 ft. S, 330 ft. E, NW cor. SW SE, Sec. 33-8-12 ....Shot with 270 qts., cleaning out; T.D. 2,700 ft.

Loring Oil Co.'s No. 10 Bowman-Hicks, 330 ft. N, 330 ft. E, SW cor. NE SE, Sec. 33-8-12 ....S.D. 2,664 ft.
Loring Oil Co.'s No. 11 Bowman-Hicks, Sec. 34-8-12....Cmtd. 6⅝-in. 2,330 ft.; T.D. 2,382 ft.

Loring Oil Co.'s No. 2 Sabine Lbr. Co., 1,430 ft. E, 340 ft. N, C, Sec. 34-8-12 ....Derrick.
Loring Oil Co.'s No. 1 Schuffert, 330 ft. S, 330 ft. W, NE cor. NE SE, Sec. 27-8-12 ....Derrick.
Loring Oil Co.'s No. 1 Schull, 330 ft. S, 330 ft. E, NW cor. SW, Sec. 26-8-12 ....S.D. soft chalk 2,600 ft.; arranging to shoot.

Ohio Oil Co.'s No. 5 Bowman-Hicks, 330 ft. N, 330 ft. E, SW cor., Sec. 33-8-12 ....Arranging to test; T.D. 2,514 ft.
Olson Bros.' No. 2 Boone-Ferguson, 330 ft. N, 330 ft. W, SE cor. NW SE, Sec. 33-8-12 ....D.S. test 2,467 ft.; S.W.; cmtd. to 2,430 ft.

W. D. Perritt et al's No. 1 Elliott, 150 ft. N, 150 ft. E, SW cor. SW SE SW, Sec. 30-8-12 ....Drlg. sandy shale 2,165 ft.
Philp Bros.' No. 1 Dow, Lot 1, Blk. 18, Zwolle Townsite, Sec. 31-8-12 ....Bailed dry 2,300 ft.; S.D.
Posey et al's No. 1 Peterson, Blk. 16, Zwolle Townsite, Sec. 31-8-12 ....S.D. 250 ft.
A. H. Tarver's No. 3 Sabine State Bank, 330 ft. N, 330 ft. W, SE cor. SW NW, Sec. 26-8-12 ....Cmtd. 6-in. 2,325 ft.; T.D. 2,377 ft.

Wheatcroft et al's No. 1 Sabine Lbr. Co., SW NE, Sec. 31-8-12 ....Drlg. 2,319 ft.
Wilder et al's No. 1 Parrott, Sec. 31-8-12 ....Drlg. 2,463 ft.

SABINE PARISH—BLUE LAKE

R. L. Gay's No. 8 Bowman-Hicks, Sec. 18-7-13 ....Bailing to test 2,552 ft.
R. L. Gay, trustee's No. 5 Sabine Lbr. Co., 330 ft. S, 330 ft. W, NE cor. SE NE, Sec. 15-7-14 ....Rig up.

UNION PARISH

Greenwood Production Co.'s No. 3 Norsworthy, 1,320 ft. S, 663 ft. E, NW cor., Sec. 9-21-3 ....Cmtd. 6-in. 2,045 ft.; T.D. 2,245 ft.

Industrial Gas Co.'s No. 6 Grayling Lbr. Co., 660 ft. E, 665 ft. N, SW cor. NW, Sec. 33-21-4 ....Derrick.
Interstate Nat. Gas Co.'s No. 1 J. M. Edwards, 1,980 ft. W, 660 ft. S, NE cor., Sec. 11-21-3 ....Rig up.
Nemours Corp.'s No. 1 Digby, 1,989 ft. E, 660 ft. S, NW cor., Sec. 15-21-3 ....Drlg. 2,000 ft.
Nemours Corp.'s No. 2 Hollis, 817 ft. S, 995 ft. W, NE cor. NW, Sec. 11-20-3 ....Location.
Stovall Drlg. Co.'s No. 1 Murray, 1,650 ft. N, 330 ft. W, SE cor. SW, Sec. 32-23-4 ....Rig up.

WEBSTER PARISH—SAREPTA AND SHONGALOO

Ideal O. & G. Co.'s No. 1 Coyle, 300 ft. N, 300 ft. E, SW cor. SW SE, Sec. 24-23-11 ....Derrick.
H. M. Jones Drlg. Co.'s (was E. W. Bateman's) No. 2 Cook, 200 ft. S, 200 ft. W, NE cor. SE NW, Sec. 2-22-11 ....4 ft. sand 2,723-27 ft.; bldg. new derrick.

H. M. Jones Drlg. Co.'s No. 1 Womble, 860 ft. S, 200 ft. E, NW cor. SW, Sec. 1-22-11 ....Derrick.
K. C. Supply Co.'s No. 1 Cochrane, 330 ft. N, 330 ft. W, SE cor. E½ NW, Sec. 36-23-11 ....Plugged back to 2,713 ft.; T.D. 2,726 ft.

Liggett et al's No. 1 Slack, 720 ft. E, 150 ft. N, SW cor. SE, Sec. 36-23-11 ....Cmtd. 6-in. 2,732 ft.
Liggett et al's No. 2 Slack, 720 ft. E, 150 ft. N, SW cor. SE SE, Sec. 36-23-11 ....Rig up.
Magnolia Pet. Co.'s No. 2 Sally Coyle, 150 ft. N, 150 ft. W, SE cor. SE NE, Sec. 2-22-11 ....Rig up.
Magnolia Pet. Co.'s No. 4 Scroggins, 150 ft. N, 150 ft. E, SW cor. SW NW, Sec. 1-22-11 ....W.O.S.R. 8 ft. sand; T.D. 2,717 ft.
Merrick Oil Corp.'s No. 3 Slack, 330 ft. N, 330 ft. W, SE cor. SW SE, Sec. 36-23-11 ....Derrick.
Sarepta Oil Co.'s No. 3 Gardner, 396 ft. N, 78 ft. E, SW cor. NW NW, Sec. 6-22-10 ....Derrick.
S. H. Riggs, trustee's No. 1 L. & A., 250 ft. S, 530 ft. E, NW cor. NW NE, Sec. 1-22-11 ....S.D. 2,100 ft.
S. H. Riggs, trustee's No. 2 L. & A., 255 ft. S, 600 ft. W, NE cor. SW NE, Sec. 36-23-11 ....Derrick.
S. H. Riggs, trustee's No. 3 L. & A., 255 ft. N, 600 ft. W, SE cor. NW NE, Sec. 36-23-11 ....Location.
S. H. Riggs, trustee's No. 4 L. & A., 255 ft. S, 600 ft. W, NE cor. NW SE, Sec. 36-23-11 ....Location.
W. O. Neely's No. 1 J. R. Slack, 150 ft. N, 150 ft. E, SW cor., Sec. 12-22-11 ....Location.
Sarepta Oil Co.'s No. 2 Gardner, NE SW, Sec. 1-22-11....Rig up.
Sarepta Oil Co.'s No. 1 Slack, SW cor. NW NE, Sec. 36-23-11 ....Rig up.
Southern Production Co.'s (was Wingfield et al's) No. 2 Slack, 163 ft. S, 140 ft. E, NW cor. NE, Sec. 1-22-11....W.O.S.R. 6 ft. broken sand; T.D. 2,734 ft.

Southern Production Co.'s No. 4 Slack, 600 ft. N, 600 ft. W, SE cor. NW NE, Sec. 1-22-11 ....Location.

ARKANSAS

JOHNSON COUNTY

Ark.-La. P. L. Co.'s No. 1 Cline, 660 ft. S, 660 ft. W, NE cor. NE SE, Sec. 16-10-24 ....Fishing tools 2,850 ft.
Conn Grable's No. 1 Hoeing, 720 ft. N, 590 ft. W, SE cor., Sec. 20-9-25 ....S.D. 2,070 ft.; C.D.

NEVADA COUNTY

C. F. Steele's No. 1 E. W. Groves, Sec. 21-14-20....S.D. 2,810 ft.

OUACHITA COUNTY—SMACKOVER

L. H. Hamilton's No. 3 Doyle, 100 ft. E, 400 ft. N, SW cor. SE SE, Sec. 23-15-16 ....Derrick.
Standard Oil Co.'s No. 7 Farris, 200 ft. S, 200 ft. W, NE cor. NW NW, Sec. 34-15-15 ....Drlg. 1,640 ft.
Wilson & Chapman's No. 1-B Arnold, 330 ft. N, 330 ft. E, SW cor. SE SW, Sec. 24-16-15 ....Rig. up.

UNION COUNTY—CHAMPAGNOLLE

Magnolia Pet. Co.'s No. 1 Gregory, Sec. 15-17-14 ....D.S. test 2,859-64 ft.; 14 jts. oil; cmtd. 5¾-in. 2,859 ft.; T.D. 2,864 ft.

Ohio Oil Co.'s No. 10 Crain, 330 ft. S, 330 ft. W, NE cor. SE SW, Sec. 1-17-14 ....Location.
Ohio Oil Co.'s No. 2 R. Pumphrey, 330 ft. N, 330 ft. E, SW cor. NE, Sec. 12-17-14 ....Derrick.
Ohio Oil Co.'s No. 4 R. Pumphrey, 330 ft. S, 330 ft. W, NE cor. NE NW, Sec. 12-17-14 ....Location.
Sundby et al's No. 2 Perdue, 75 ft. S, 150 ft. E, NW cor., Sec. 32-16-14 ....S.D. 3,205 ft.

UNION COUNTY—EL DORADO

H. L. Hunt's No. 6 Pratt, 150 ft. N, 330 ft. E, SW cor. NE NE, Sec. 7-18-15 ....S.W. 2,214 ft.
Malloy & Co.'s No. 1 Murphy, Sec. 1-18-16 ....Rig up; W.O.
Malloy & Co.'s No. 3 Robertson, NE cor. S½ SW NE, Sec. 6-18-15 ....Location.

EAST TEXAS
HARRISON COUNTY

Calatex O. & G. Co.'s No. 6 Agurs, 755 ft. N, 699 ft. W, Mile Post 27, in J. Womack Sur. ..... Location.
Shell Rock Pet. Co.'s No. 1 Oliver Dougherty, W. D. Burris Sur. ..... Fishing; T.D. 3,445 ft.

PANOLA COUNTY

Ark-La. P. L. Co.'s No. 2-A G. W. Brumble, 477 ft. W, 473 ft. S, NW cor., Jno. Womack Sur., in B. C. Jordan Sur. ..... Drlg. broken lime 3,918 ft.
S. E. Bell et al's No. 1 Burnett Lbr. Co., center S. B. Hendricks Sur. ..... Location.
Jackson et al's No. 1 Dunham, 150 ft. W, 150 ft. N, SE cor., M. I. Dunham 29 ac., in Chas. Haley Sur. ..... S.D. 2,005 ft.
Nat. Gas Products Co.'s No. 3 Tom Moore, 889 ft. E, 7,928 ft. S, NW cor., B. C. Jordan Sur. ..... Drlg. 3,500 ft.
The Texas Co.'s No. 10 G. W. Brumble, SE cor., E. F. Mitcheson Sur. ..... Began drlg. July 17; cmtd. 10-in. 38 ft.; drlg. 1,450 ft.
The Texas Co.'s No. 11 G. W. Brumble, 2,814 ft. N, 700 ft. W, SE cor., E. F. Mitcheson Sur. ..... Location.
Doris Thomason's No. 15 Crenshaw, 1,992 ft. S, 2,305 ft. E, SW cor., Jno. Womack Sur., in B. C. Jordan Sur. ..... Derrick.
Warren & Davis' No. 1 McNuse, 1,671 ft. S, 1,329 ft. E, NW cor., Abe Brooker Sur. ..... Derrick.

ROCKY MOUNTAIN AREA

(Continued from Page 53)

the Fountain formation of Pennsylvanian age in its No. 1 Anderson, NE NE SW Section 18-3n-70, Lyons Dome.

WYOMING

Favorable indication pointing to the opening of a new light oil field in Wyoming were found this week in the Midwest Refining Co.'s No. 11 Middy, C NE NE Section 23-36-79, on the Midway Dome, 30 miles south of the center of the Salt Creek Field and 15 miles north of Casper. At 5,157 feet the bit topped what is believed to be the second Wall Creek sand in the Frontier formation. The sand was cored 10 feet on Wednesday and showed gas in the upper half and the last 6 feet cored contained oil, the core coming out of the hole bleeding a light gravity crude. Thursday 10 feet additional core was taken and it showed saturation all the way to the bottom It was still in sand when coring stopped at 5,187 feet. The well was drilled with a rotary and the hole is open below 214 feet, at which depth the 15½-inch conductor pipe was set.

When the core showed 30 feet of saturated sand, it was decided not to take any more chance with nearly 5,000 feet of open hole and drilling was suspended to run a string of 9⅝-inch pipe. This casing will be set on top of the sand at 5,157 feet and drilling in will begin. In the meantime the development holds promise of being the most important discovery made in Wyoming in several years.

The Midway Dome is on the line of folding upon which is imposed the Salt Creek Dome on the north and the Big Muddy Dome on the southeast in Converse County. Between the Midway and Big Muddy structures lie the North Geary and Geary Domes. More than $600,000 has been expended in the past 16 years in attempts to prove the Midway and Geary Domes, but none of these wells reached the second Wall Creek. The Producers Oil Co. lost its hole on the NW cor. SE Section 14-35-79 at 3,800 feet in 1918. The Midwest drilled two tests on the NE Section 23-35-79 in 1919, the deepest going to 4,822 feet. The Continental Oil Co., the Carter Oil Co. and the Fensland Oil Co. jointly drilled on the NE NW Section 32-34-77, on the Geary Dome, in 1921, but lost the hole at 4,890 feet.

Many Difficulties Overcome

H. Leslie Parker, who was active in the development of the Big Muddy and other Wyoming fields, and Marion N. Wheeler, now of Los Angeles, originally discovered and mapped the three structures and filed upon government land under the old placer mining laws. Conflicting claims were adjudicated in 1916 and 1917 when the first contract for a test on the Midway Dome was made. After the general leasing act of February 25, 1920, became a law, Parker and Wheeler made applications for prospecting permits under various clauses of that act. Numerous difficulties continued to arise out of changed governmental policies and not until last fall were conditions favorable for again making a test. The departmental committee appointed by Secretary of the Interior Wilbur went into the whole situation thoroughly and recommended that pending applications be reinstated and permits extended under a group development plan for the three structures. This plan also provided for a unit development of the structures in the event oil was found if the various interests could be brought into agreement. There were 200 unit holders of two syndicates residing in this country and Europe and 75 colocators, permittees and heirs to be consulted. Negotiations for the group development were conducted with H. C. Brettschneider, vice president of the Midwest Refining Co., representing that company; John Barnett, president, representing the Mountain Producers Corp.; H. A. DeCompeign, representing French interests; and A. D. Aitken, representing the Salt Creek Producers Association. These interests contracted for the group development plan and it was approved by Secretary Wilbur. Authority was given for the drilling of one well on government land on each of the three structures. Contract was made with Noble & Olson to drill the Midway test for the joint interests and the well commenced spudding on May 5, 1930.

The three structures embrace approximately 23,000 acres. The Midway Dome has 7,000 acres inside the closing contour and the closure is 1,250 feet, or 50 feet more than Salt Creek. When the casing is set, it is the intention to drill in the discovery well and go through the sand. Later developments will determine whether the well will be continued on down to the deeper horizons. The opening of another light oil field on the Midway Dome, which now looks promising, will have a decidedly important bearing on the industry in Wyoming. Salt Creek, the principal source of crude for the Casper refineries, is running around 25,000 bbls. per day, or about half of the capacity of the refineries which represent an investment of $25,000,000. The Salt Creek Producers, Mountain Producers and Midwest Refining companies will be large beneficiaries.

Natrona County

The Midwest Refining Co.'s No. 29-DT, NW Section 35-40-79, the deep test to the granite, is bottomed at 4,290 feet and lowering the 6⅝-inch. The hole topped the Deadwood formation at 4,850 feet, of which there is several hundred feet. The top of the Amsden was at 3,900 feet. There were 950 feet of Amsden and Madison with no sharp demarkation between them. A show of oil with water was found in the Amsden and water in the Madison.

The Bessemer Oil Co.'s No. 6, NE Section 18-33-83, Poison Spider, was completed at 1,426 feet with an initial production of 125 bbls. in 24 hours.

Big Horn County

The Ohio Oil Co.'s No. 1 Union Gas, NE cor., Section 22-56-97, the discovery well in the Tensleep formation which gives Wyoming another black oil field, has been shut in at a total depth of 5,414 feet. During the last 48 hours of the test it averaged 25 bbls. per hour, or 600 bbls. per day. There is little gas in the oil and it is believed that if gas lift were installed the well might make several thousand barrels per day. The oil tested 26 gravity and continued only one-half of 1 per cent sulphur, a much better grade than found in most of the black oil fields in the Big Horn Basin. The top of the Embar was found at 5,300 feet and that formation showed saturation at 5,304-25 feet. The top of the Tensleep was at 5,340 feet and it was saturated all the way to the bottom at 5,404 feet. While the formations in which the oil was found are principally the Embar and Tensleep, it is believed that some of the oil may be coming from the Amsden.

The Ohio Oil Co. controls most of the acreage on the structure and has an abundant supply of gas on that structure and the adjoining Garland Dome in the event it decides to install a gas lift. Recent interest in the black oil fields of this district is certain to lead to increased activity and there is a strong belief among the operators that this area may be selected for a plant to use the German hydrogenation process under license from the Standard Oil Co. of New Jersey. Four of the major companies with black oil properties in that district are among those granted licenses to use the process and it is considered possible that they may join in erecting a plant. The Ohio Oil Co.'s No. 1 Easton, NW NW, Section 33-56-97, Garland Dome, which proved the Madison lime for gas on that structure, is standing with the 7⅝-inch cemented at 3,887 feet. The well made 58,000,000 feet of gas per day in the top of the Madison. The gas was killed to drill deeper. The Producers & Refiners' No. 3 Government, NW NW Section 24-56-98, Garland Dome, joint with the Kinney-Coastal Oil Co., is fishing at a total depth of 4,234 feet.

Park County

The Lenco Petroleum Co.'s No. 2 Rousseau, NW SE NW, Section 33-51-100, Oregon Basin Field, has been completed at 3,935 feet for 180 bbls. a day. It is believed the well would be a bigger producer but for the tools which were left in the hole. The same company's No. 3 Rousseau, SW SE NW, Section 33, is drilling at 3,485 feet. The Oneida Oil Co.'s No. 1 Beck, SW cor., Section 28-52-100, is standing after barely drilling into the Embar at 3,710 feet. The work of erecting 4,000 bbls. of tankage has been finished and preparations are being made to complete the well. It made several flows by heads and various estimates have been made as to what it will do.

The Texas Production Co.'s No. 1 Freeman, C NW SE, Section 30-51-100, is drilling at 3,493 feet. The Midwest Refining Co.'s No. 31 Frannie Oil, SW SE, Section 25-58-98, Frannie Dome, is drilling at 2,707 feet in hard lime shell, and its No. 31 Rosenberg, SW SE Section 24-58-98, is drilling at 2,110 feet in conglomerate. The Continental Oil Co.'s No. 26 Elk No. 2, SE NE, Section 24-58-100, Elk Basin, is drilling at 1,870 feet. The California Exploration Co.'s No. 2, NE Section 14-48-102, Pitchfork structure, is drilling at 3,660 feet. It was a small well in the Embar.

Hot Springs County

The Midwest Refining Co.'s No. 8 Weeks, NW SE, Section 6-44-98, Wagonhound, is drilling at 2,560 feet in black shale with the 8¼-inch at 2,541 feet.

Fremont County

The Texas Production Co.'s No. 1 State, SW SW, Section 36-34-95, Alkali Butte Dome, is held up at 4,452 feet with a fishing job. It is through a sand in the Dakota which made 12,000,000 feet of gas and sprayed 25 bbls. of oil per day. The Lakota is the next objective. The Kinney-Coastal Oil Co.'s No. 1 Dykeman, SE SW, Section 22-3n-1w, Pilot Butte, is redrilling after cementing off cave at 3,735 feet. The Producers & Refiners' No. 10, Section 14-32-95, Sand Draw, is bottomed at 3,420 feet and preparing to run the 10-inch. This is the first well on top of the dome to get below the gas sands in the Frontier and it is believed to be close to the top of the Dakota. Same company's No. 2, SE NW, Section 33-34-92, Muskrat Dome, is drilling at 3,479 feet in shale.

Carbon County

The Producers & Refiners' No. 3, Hatfield Dome, Carbon County, is drilling in sand at 4,115 feet, and its No. 4, Section 7-26-89, Wertz Dome, is bottomed at 3,385 feet with the 6¼-inch at 3,367 feet. The bailer stops at 2,980 feet and swedging is in progress. The same company's No. 16, Section 25-26-87, Ferris Dome, is drilling at 3,100 feet in the red beds. The Midwest Refining Co.'s No. 31 Eades, SW cor. SE, Section 1-18-78, Dutton Creek, was drilled through the Muddy sand and stopped in shale at 4,911 feet. It will not be drilled to the lower sands. It swabbed 100 bbls. C. E. Bivens and others' No. 1 Red Feather, NE SW SW, Section 36-13-92, Baggs Dome, is spudding. This is a 1,000-foot contract to carry the well to the gas sand expected at around 500 feet.

Sweetwater County

The Mountain Fuel Supply Co.'s No. 2 State, Section 16-16-104, South Baxter Basin, cemented the 6⅝-inch at 2,100 feet, and its No. 1 Hay, NE NE, Section 26-17-104, which has been idle since last winter, is resuming at 3,516 feet. Same company's No. 1 Union Pacific, NW NE, Section 13-19-104, North Baxter Basin, is running the 8⅝-inch at 3,100 feet after being idle at that depth since last February.

Lincoln County

The Midwest Refining Co.'s No. 1 Larcher, SE, Section 25-37-117, Grays River, is drilling at 2,202 feet in sand and shell, with the 8⅝-inch at 1,977 feet.

Niobrara County

The Ohio Oil Co.'s No. 4 Converse Sheep, SW SE, Section 32-36-65, Lance Creek, is drilling at 1,950 feet. The Argo Oil Co.'s No. 7 Wehopeso, SW NW, Section 19-39-60, Mule Creek, has not made any new hole since it encountered 500,000 feet of noninflammable gas in the Tensleep at 2,864 feet. Tools can be run to bottom, but when half way out the hole cleans itself.

Weston County

Three completions were reported in the Osage Field this week. Curtis & Straitiff's No. 2 Updike, SE cor. NW, Section 14-46-64, is flowing 100 bbls. a day from sand at 1,550-78 feet. The Osage Trust Co.'s No. 6, NW SW NW, Section 13-46-63, missed the sand and was dry. The Wesco Oil Co.'s No. 6 Fee, NW NE SE, Section 13-46-64, will pump 25 bbls. from the sand at 1,448-72 feet. The Osage Trust Co.'s No. 5, NW NE SE, Section 14-46-64, is rigging, and its No. 6, SW SE SE, Section 14-46-64, is spudding. James McCullogh's No. 2 Logan McCullough, NE NE, Section 23-46-64, is spudding, and the Lambie Oil Co.'s No. 2 Bock, SW NE, Section 14-46-64, is drilling at 500 feet.

The Osage Trust Co.'s No. 4, NE NW SE, Section 14-46-64, is drilling at 300 feet, and Carl Cundy's No. 1, NW NE, Section 31-46-63, is drilling at 750 feet. The Osage-Wyoming Oil Co.'s No. 1 Witzell, NE NW, Section 30-46-64, is drilling at 1,700 feet, and Ton Don's No. 4, NW SE, Section 20-46-63, has a showing of oil and gas in the top of the sand at 1,163 feet and is underreaming and lowering pipe. M. K. Mouser's No. 1 Bock, NW cor. Section 2-46-64, has been sold to Henderson, Garbereck, and others, of Denver, and new owners are erecting a steel derrick and rigging standard tools to finish. It is bottomed at 1,135 feet. Dornacher and others' No. 2, SE SE, Section 12-46-64, is drilling at 1,000 feet, and Bradley-Menewal's No. 10, SE NW, Section 20-46-63, is rigging up.

Converse County

The Weisman Big Muddy Oil Co.'s No. 1, SW SE, Section 6-33-76, is drilling at 1,800 feet.

MONTANA

In the Border Field the Inland Petroleum Co. has completed its No. 1 Farbo on Section 1-37-4, with an initial production of 250 bbls. Oil was encountered at 2,530 feet. The Ohio Oil Co.'s No. 2 well, which if successful, will add a mile to the width of the field, is recementing and should soon be completed. It continues to make about 3,000,000 feet of gas. This well is located west of production. Another test is being started a quarter mile farther to the west. The Ohio's No. 1 well on Section 1-37-4, has settled down to about 40 bbls. a day. With 13 wells now under way in the

field, announcement is made that the Adanac Oil Co., a Canadian firm, will drill eight wells on its acreage on the Montana end of the structure.

One well was completed in the Kevin-Sunburst Field, the No. 5 Medford Morton, on Section 24-34-2. The well had an initial production of about 75 bbls. and will probably make a 25-bbl. well, settled production.

The Texas Production Co. has taken over the acreage and drilling well of the Kootenai Oil & Gas Co. in the Cut Bank area in northern Montana. The Kootenai holdings consist of a 200-acre tract north of the town of Cut Bank, where a test well is now standing at 750 feet. It is understood that the Texas will start work immediately on this well, which is one of five tests drilling in the Cut Bank area. Location of the test is Section 13-35-6.

The Sunburst Oil & Refining Co.'s test on the Pinhorn Dome in northern Montana is drilling near the bottom of the Colorado shale and reports continued showings of oil. This well, which is located on Section 9-37-6, should reach the Dakota sand within a week. It is the first test on the Pinhorn Dome.

The Minnesota Flatwillow Oil Co. lost its rig, boiler house and its entire equipment on Section 5-12-25, Flatwillow structure, in a fire last week. The well had been shut down after striking a heavy flow of water. Oil showings were reported in the upper sands at this location.

Rocky Mountain Production

Daily average pipe line runs from the various pools in the Rocky Mountain area for the week ending August 2:

WYOMING	
Salt Creek	30,060
Frannie	160
Big Muddy	1,720
Oregon Basin	2,920
Dutton	50
Elk Basin	780
Byron	10
Warm Springs	130
Lovell	20
Perris	30
Grass Creek	2,110
Hamilton	910
LaBarge	2,270
Lance Creek	130
Lost Soldier	1,070
Osage	750
Poison Spider	240
Rock River	2,130
Simpson Ridge	50
Teapot Dome	30
Dallas-Derby	240
Hudson	280
South Casper Creek	1,120
Total	47,210
MONTANA	
Cat Creek	1,120
Kevin-Sunburst	5,850
Pondera	2,410
Lake Basin	50
Border	480
Total	9,910
COLORADO	
Moffat	1,272
Fort Collins	1,204
Florence	595
Iles	1,129
Tow Creek	395
Boulder	25
Rangley	50
Total	4,670
NEW MEXICO	
Hogback	480
Rattlesnake	1,350
Table Mesa	100
Artesia	783
Cap Rock (Maljamar)	832
Jal	1,514
Hobbs High	33,241
Lea City	5,146
Miscellaneous (Lea County)	341
Total	43,787
Grand total	105,557
Week ending July 26	106,485
Difference	908

TEXAS PRORATION SEEMS STEP NEARER

(Continued from Page 29)

sion, and told how so many small companies were taking oil from the Panhandle fields that the major purchasing companies need take only 50 per cent of the present production. He said he would not object to raising the production of this area to 85,000 bbls. per day instead of 80,000 bbls. as is recommended by the report.

Mr. Emory offered, in the way of a suggestion, as others have also suggested, that the various fields choose their own proration committees to work out proration plans before the railroad commission takes action, but herein may lie considerable trouble for the general proration plan unless every producer and member of the committees co-operate to the fullest extent in carrying out their work and the general scheme of things.

Gulf Coast Exception

T. D. Strong, representative of the Yount-Lee Oil Corp., producing on the Gulf Coast, was the second company representative to take exception to the proration plans as submitted in the report. He contended that the Gulf Coast district should not be made to suffer for and with the other districts, but should be allowed to produce as much as the demand called for, the demand for this crude at the present time being more than the present production. He asked if anybody or any commission had the right to take advantage of one area and give to another area which does not have these advantages, referring to the Gulf Coast and North Central Texas districts, the latter district having a hard time disposing of its production and the former having plenty of purchasers ready to take the production. Mr. Strong said, "Reduction should come in fields where overproduction exists, and the Gulf Coast area has kept its production within demands. Others should have done the same. Proration should apply to individual fields or grades of oil, and it is not right to put Gulf Coast oil in competition with oil from other areas."

Mr. Penn interposed at this time to ask Mr. Strong what he thought Gulf Coast crude would bring in price if the Yates Field or Van Field was turned loose to flood the market. J. F. O'Donohoe of Wichita Falls also asked him how price and demand would be affected if Raccoon Bend and Sugarland in the Gulf Coast were opened up. Mr. Landreth also stated that there is a demand for West Texas oils also but still these fields are curtailed, and that other fields should be curtailed to help the present situation.

All members attending the meeting seemed to have but one thought uppermost in their minds, and that was to curtail the whole State, excepting no fields, but cutting production in all of them, taking different things into consideration, and not making such curtailment exceptionally burdensome to any producer. Such curtailment is bound to hurt the producers, but suffering a little now is better than to have the bottom fall out of the industry.

Urges Support of Plan

R. F. McArthur of the Barnsdall Oil Co. urged everyone to follow the committee's plans. He said, "Local committees should report to a central committee which should then report to the railroad commission. Local umpires should work through their local committees, the central umpire work under the central committee, and the result of the work tendered the railroad commission for its advisement."

Mr. Neff, in speaking for the railroad commission, said that the commission was in favor of operating under the pipe line law and finding out if it is substantial and can be enforced. If it can be enforced he is for rigid enforcement.

Mr. Daly, president of the Shell Petroleum Corp., St. Louis, who attended the meeting, congratulated the committee on the very constructive report, and the work it had done, and remarked, "Proration hurts all, but we should all take the hurt now to prevent greater ills to the industry."

Farish Favors Report

W. S. Farish, president of the Humble Oil & Refining Co., Houston, also congratulated the committee on the work it had done, stating that real headway had been made in state-wide proration. Mr. Farish said, "This workable report can be lived up to and observed without damage to any particular group or field." He mentioned the fact that at one of the first proration meetings held in Austin, when Winkler County was at its peak in production and interest, that the producers talked state-wide proration at that time.

"A barrel of oil is a barrel of oil, and whatever degree of difference in price, gravity and location, the refineries with their improved processes of refining can change these," said Mr. Farish.

"Conservation of oil and gas and the prevention of waste is the main reason for proration," Mr. Farish said, "and scientific production of a field will produce much more oil than reckless production of a field. The Yates Field, Pecos County, is an object lesson in the United States, in production, and it costs less than 4 cents to produce a barrel of crude in this field."

He stated that he was for the program outlined by the committee, was for statewide proration and pledged the support of his company in helping to obtain it. "It is Texas' own fault if proration fails and we suffer," said Mr. Farish in ending his talk to the men at the meeting.

Mr. Daly, Mr. Farish and Underwood Nazro of the Gulf Production Co. made a few brief remarks upon imports of crude into the United States, Mr. Daly stating that the Shell-Union exports barrel per barrel to what it imports. Mr. Farish stated that the Standard of New Jersey, parent company of the Humble Oil & Refining Co., had cut its imports, and Mr. Nazro remarked that the imports of his company had decreased 25 per cent and that production of his company in Mexico was decreasing, helping to curtail imports from that country.

The following resolution in regard to imports was adopted by the group just before it adjourned:

"Whereas, on this thirtieth day of July, 1930, there is gathered in the State Capitol Building at Austin, Tex., one of the largest and most representative groups of oil producers from all portions of the State ever so gathered, representing both the smaller independent companies and individuals and the so-called major companies, the purpose of said gathering having been a hearing called by the Railroad Commission of Texas on the question of putting into force and effect the new common purchaser act enacted by the last session of the state legislature, said hearing now having come to adjournment.

"And, whereas, it has been called to the attention of the oil producers of Texas so gathered in Austin, this day, that in spite of all efforts at curtailment of production within the United States, particularly those put forth by the producers and the conservation bodies of the states of Texas, Oklahoma, California and New Mexico, as well as elsewhere, said efforts are now being distressingly nullified by two factors, to wit:

"First, an increase of 72,600 bbls. per day in the daily average crude runs to stills by refineries in the United States within the week ending July 26, 1930, bringing said total runs to stills to 2,500,600 bbls. per day, the total of gasoline stocks in the United States now being 44,751,000 bbls.

"Second, an increase in the rate of gasoline importations from foreign countries into the United States, particularly from Venezuela, as reflected by recent statistics.

"Now, therefore, be it resolved by the oil producers of Texas this day assembled that we greatly deplore and regret the aforesaid increases in gasoline production and imports and consider them as endangering and tending to nullify all curtailment and conservation measures in this country, and we hereby call upon and request the refiners of the United States, particularly those in the Mid-Continent area, and all importers of gasoline and foreign crude oil to materially reduce their production and importations in line with the conservation measures being attempted within the United States."

Motion submitted and adopted with instructions that copies of this resolution be submitted to the general press and the oil trade journals.

SOUTHWESTERN DISTRICT A.P.I. MEETS IN GALVESTON SEPTEMBER 4

The fall meeting of the southwestern district of the American Petroleum Institute Division of Production has been set for September 4 and 5 at the Buccaneer Hotel, Galveston, Tex.

Chairman W. H. Meier of Dallas, Tex., announces the program, so far as now completed, as follows:

First Day—September 4

1. "Results of Survey of Oil Field Equipment for Conformance to A.P.I. Specifications," W. C. Shutts, Humble Oil & Refining Co., Houston, Tex.

2. "Equipment and Methods of Preventing Blowouts in Drilling," group paper by Southwestern District Committee on Drilling Practice, C. W. Alcorn, chairman.

3. "The Advantages of Insulation of Oil Field Boilers," W. H. Meier, Atlantic Oil Producing Co., Dallas, Tex.

4. "Proper Installation of Gas Separators to Obtain Maximum Efficient Separation of Oil and Gas," Speaker to be selected.

5. "Further Development of Cementing Practice in the Gulf Coast Area"—continuation of studies by Messrs. Manning and Doherty W. T. Doherty and M. Manning, Humble Oil & Refining Co., Houston, Tex.

6. "Results Obtained in Yates Field by Tubing Flowing Wells," Harvey Hardison, the California Co., Midland, Tex.

7. "Report of Committee on Designation of Flow Bean Sizes," W. W. Scott, chairman, Drilling Practice Committee.

Second Day—September 5

1. "Description of Deep Well Drilling in the Big Lake Oil Field," speaker to be selected.

2. Question box. Discussion of problems presented from the floor. To facilitate handling it is requested that questions be submitted in writing to the secretary of the division, E. S. Durward, Shell Petroleum Corp., Dallas Athletic Club Building, Dallas, Tex., prior to the meeting.

The technical sessions will close at noon September 5 with announcements of future activities of the division, and the afternoon may be devoted to such recreational pursuits as the individual members may select, no fixed entertainment program having been prepared.

Final announcement of speakers selected for the subjects left open will be made at an early date.

The committee suggests that members attending this meeting make their hotel reservations direct and register at the desk provided for that purpose in the Buccaneer Hotel before the opening of the first session September 4. There will be a registration fee of $2.50 to defray expenses of reporting, issuing advance copies of papers, etc.

CANADA SURVEY WORK

CHATHAM, Ontario, Aug. 4.—The Geological Survey of Canada this summer will have 11 parties in the field in the prairie provinces and two field parties in the Northwest Territories. Topographical surveys will be carried on by W. H. Miller and assistants in the Nordegg area, J. W. Spence and party in the Wildcat Hills and J. A. MacDonald in Hillcrest, while W. A. Johnston and C. O. Hage will investigate and map the Pleistocene and recent deposits in parts of southeast Alberta and southwest Saskatchewan. Attention will be given to oil prospects.

PRAIRIE SHIPMENTS

The Prairie Pipe Line Co. reports crude oil deliveries for the month of July as follows: Total deliveries 4,811,206.02 bbls.; daily average 155,200 bbls.

ACID REFINING OF NAPHTHENE-BASE OIL

(Continued from Page 38)

some of the less stable compounds and polymerize them, but not sufficient to wash the reaction products out. However, this irregularity may be due to the redissolving of the tars by the oil.

The curve (Figure 2), showing the effects of sulphuric acid on the gravity of a naphthene-base lubricating distillate, indicates that the A.P.I. gravity increases with an increase in the amount of acid used per treat—with the exception of the 4-pound per barrel treat. The 4 pounds of acid used in this treat probably caused

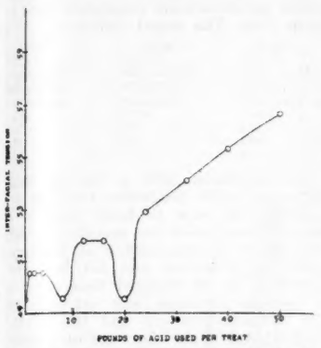

Figure 7—Curve showing the effect of sulphuric acid on the inter-facial tension of a naphthene-base lubricating oil.

polymerization of the unsaturates, but was not sufficient to dissolve these heavy compounds—thus the specific gravity was increased or the A.P.I. gravity lowered.

The color curve (Figure 3) shows a sharp decrease as the quantity of acid used is increased up to approximately 10 pounds per barrel. At this point the curve flattens out and remains almost constant, with but slight decrease until the curve reached the 40-pound treat. More than this quantity produces a rapid decrease in color. The color curve is in exact accordance with the theory that the sulphuric acid treat tends to remove, by solution, those substances, namely, polymers, resins and oxygen-bearing compounds, which produce the color. The color is inversely proportional to the quantity of acid used, that is, the greater the amount of acid the lighter the color.

The index of refraction curve (Figure 4) is a very irregular one, showing a sharp increase to 1 pound per barrel treat and a gradual decrease to 16 pounds per barrel treat. From this point the curve is a series of waves, increasing

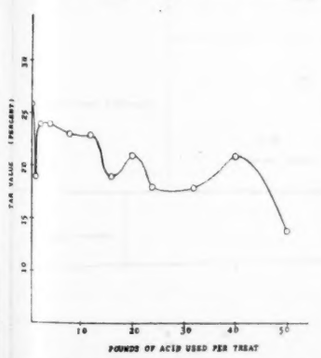

Figure 8—Curve showing the effects of sulphuric acid on the tar value of a naphthene-base lubricating oil.

and decreasing with each succeeding treat.

Since the refractive indices of saturated hydrocarbons is lower than those of similar boiling point naphthenes, and again the indices of aromatic hydrocarbons are less than that of naphthenes,[3] and the general tendency of the curve is decreasing as the quantity of acid increases, the indices of refraction also bear out the theory that the naphthenes, aromatics, and unsaturates have been removed to a certain extent by the treatment.

[3]Gurwitsch, p. 152.

Coefficient of Friction

The coefficient of friction is largely dependent upon the wetting power of the lubricant. It is known that unsaturates and aromatics have a greater wetting power than the paraffins. The coefficient of friction curve (Figure 5) for the naphthene-base lubricating stock has a general increase for an increase in the quantity of acid used per treat, except for the 20-pound treat. At this point, there is an abnormal increase in the coefficient of friction. This would indicate a serious experimental error or that the unsaturates, etc., had been removed to a greater extent than at the 50-pound treat, or that the 50-pound treat caused excessive oxidation or sulphonation.

This abnormality does not agree with same cut as shown by the tar curve. At this point on the tar curve it is found that the tar value increases. The reason for this disagreement is, in all probabilities, due to error in determining the tar value, or the presence of mineral matter in the 20-pound treat, which would tend to cause an increase in the coefficient of friction. The presence of mineral matter in the 20-pound treat is evidenced by the high ash content.

Both the surface tension and the interfacial tension are of importance in determining the value of an oil as a lubricant. The interfacial tension has, perhaps, the most influence, since the surface tension varies with molecular weight[4] and the

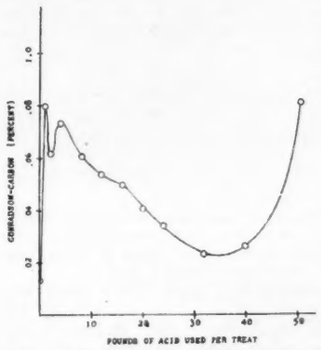

Figure 9—Curve showing the effects of sulphuric acid on the Conradson-carbon of a naphthene-base lubricating oil.

series of the hydrocarbons.[5] The tension at the interface of oil and water is a measure of its tendency to emulsify, and also its tendency to penetrate into tight-fitting bearings and form a lubrication film. The surface tension curve (Figure 6) shows a general but slight decrease with increase in amount of acid used per treat. This indicates that the acid treat has removed some of the naphthenes, aromatics, and unsaturates. The interfacial tension curve (Figure 7) agrees with the theory of Gurwitsch[6] since its general trend is to increase as the quantity of acid is increased. This is due to the fact that the interfacial tension decreases in the order of the series—paraffins, naphthenes, aromatics, and unsaturates. The 20-pound treat is an interesting point to note on this curve. There is a sharp decrease in the interfacial tension. This decrease agrees with the tar curve at the same point, but disagrees with the coefficient of friction. The tar curve shows an increase in unsaturates, etc., and a decrease in the interfacial tension would be expected. As previously stated, the high coefficient of friction for the 20-pound treat is probably due to mineral matter in the oil as the ash content increased for this treat.

The curve (Figure 8) showing the effects of sulphuric acid on the tar value of a naphthene-base lubricating distillate, has irregularities that have been explained in the discussion of the other curves. There is a general decrease in the tar value as the quantity of acid is increased. This is to be expected.

The curve (Figure 9) showing the effect of acid on the Conradson carbon,

[4]Rittmann & Egloff J.I.E.C. 1915-578.
[5]Gurwitsch, pp 142, 354, 397.
[6]Gurwitsch, p 152.

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decreases regularly to a minimum point and then rises slightly at the highest acid treat—with the exception of the 20-pound treat. In the 50-pound treat, a certain amount of polymerization of the lighter products and the formation of sulphones and sulphonates has become appreciable, thereby increasing the carbon residue.

An examination of the data obtained in these experiments indicates that the 20-pound treat would yield a highly satisfactory lubricating oil.

REPRESSURING SUCCESS IN SUGARLAND FIELD

(Continued from Page 31)

pressuring purposes. Direct connections are made with this system from the gas traps of the producing wells, and, in turn, the gas for the plant and for fuel is taken directly from the gathering system. An unbroken cycle of gas is maintained at all times.

In operation of the pressuring system the gas passes from the field gathering system through a 4'x20' scrubber, where any oil and moisture is removed before the gas enters the low-stage intake header. There are three headers traversing the length of the compressor plant building. The first, or low-stage intake header, 16 inches in diameter, feeds the six low-stage machines. The second header of 12-inch size is divided into two sections, the first receiving the hot gas from the low-stage machines which has been boosted to 400 pounds pressure. From this section the hot gas passes through four 500-pound working pressure Braun intercoolers, and thence back into the second section of the second header which is the intake header for the four high-stage compressors. Any gasoline or water condensate from the cooling operation is accumulated in a 500-pound working pressure trap on the discharge side of the heat exchanger. There is very little accumulation here and this is dumped by hand. The cooling medium is water pumped in a cycle from the cooling tower.

The third header, which is of 4-inch size, is for the discharge of the high-stage machines, and from which the gas at an average pressure of around 1,350 pounds is taken directly through Shaffer chokes, through a Westcott orifice meter set, through an expansion joint, and on to the key wells. Expansion joints have been placed both here and at each key well to take care of any needs of the line.

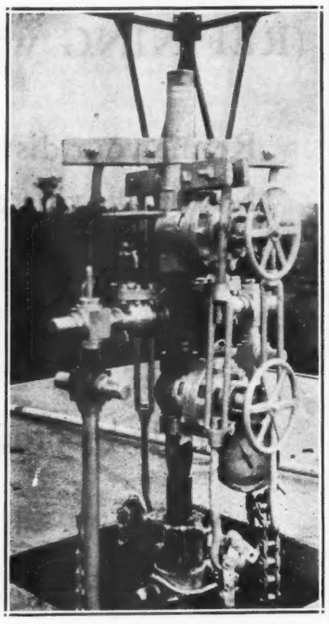
Header Installation

Fuel gas and cooling water for the compressors are handled through a header installation on the opposite side of the plant. A 15½-inch header connected directly with the field gathering system distributes fuel to each of the 10 compressors. Recently, however, since the completion of No. 14 Brazos, a dry gas well, gas from this well has been substituted for fuel as it tests only 0.25 per cent of hydrogen sulphide as compared with the 0.50 per cent or higher for raw field gas supplied through the regular field gathering lines.

Handling the cooling water for the machines presented a problem considering the field being very low and flat. The company did not wish to put in an elevated tank as ordinarily would have been required, and, in view of the field being subject to overflow a hot water well for the discharge of the machines was not desired. In getting around this situation an innovation in cooling methods has proved extremely adaptable and efficient and in addition necessitates only one pumping operation and handling of the water instead of two as is the customary procedure. By the system at Sugarland, the cooling water is pumped directly from the pit of the cooling tower, through the engines and back over the cooling towers in one operation. The need of a water reservoir and a hot water well, requiring, first, pumping to the reservoir, and, second, pumping from the hot water discharge well back to the cooling tower, has been eliminated.

At present three pumps handle the cooling operation at the Sugarland plant. Two of the pumps are used in continuous service with the third being for relief. These pumps are hooked up so if for some unforeseen reason either should go down, a regulating valve would close off the fuel to prevent the engines from burning out. Additional precautionary devices have been provided to insure the cycle of the cooling water, including the installation of a thermometer on each engine and a small sight feed drip on each discharge line.

The latter is a rather unique arrangement. The drip is a quarter-inch piece of



New type casinghead control for injection of gas into key wells.

pipe connected directly out of the bottom of the engine's discharge line. As long as the cooling water cycle is working properly, the water passing through the engine, a steady stream of water will flow from the drip. If the pressure of water to the engines should cease, the flow to the drip would stop. This would be noticed so the engine could be cut off. With the pressure from the pumps to the engines off, the back pressure from the cooling tower might reverse the flow of water but this has been taken care of by a ball and seat check valve in each engine's discharge line to the cooling tower, the valve being located just ahead of the sight feed drip so no water can get back into this drip. Although the flow is comparatively little, no water from the drips is wasted, it being collected and flowed by gravity back into the bottom of the cooling tower.

For starting of the engines a small two-stage Worthington compressor maintains approximately 250 pounds of air reserve pressure in air bottles.

Hookup of Key Wells

The three key wells, Nos. 3 Camp, 6 Brazos Farms and 1 Nelson, are so hooked up that gas may be induced through the casing to blow the hole clean; then, the process can be reversed and the gas induced through the tubing. Injection of gas through the tubing prevents expansion of the casing due to the heat of the high-pressure gas which tends to cause leaks.

At the induction pressure required, which averages around 1,350 pounds, each of these wells is taking slightly less than 1,000,000 feet of gas daily as is shown by the report of one day (May 15) picked at random:

Well—	Amount of gas in cu. ft.	Induction pressure
No. 6 Brazos	899,000	1,350
No. 3 Camp	864,000	1,350
No. 1 Nelson	861,000	1,350
No. 5 Sugarland	273,000	*
Total	2,897,000	

*Experimental.

On that same day, a complete report of production and repressuring data, which is typical of what is being done at Sugarland, follows:

Oil produced	12,073 bbls.
Gas produced	3,496,000 cu.ft.
Gas-oil ratio	289 cu.ft.
Gas induced	2,897,000 cu.ft.
Fuel or waste gas	599,000 cu.ft.
Net loss of gas per bbl. of oil produced	49 cu.ft.

Low Gas-Oil Ratio

These figures show that on that day the field, with an already low gas-oil ratio for any other field of 289 feet per barrel obtained through proper control of production by efficient flowing methods, had a net gas-oil ratio of 49 feet per barrel considering the return to the sand of 2,897,000 feet of the total 3,496,000 feet produced. In terms of conservation effected by repressuring, only 599,000 feet of gas actually was taken from the reservoir on that day as against 3,496,000 feet which otherwise would have been blown to the air, the loss of which pressure from the sand would have lessened the flowing life of the field and the ultimate recovery.

The performance of the plant for the first two months of its operation, which includes reports on the work in its early stages, indicates more completely what is being done. The report follows:

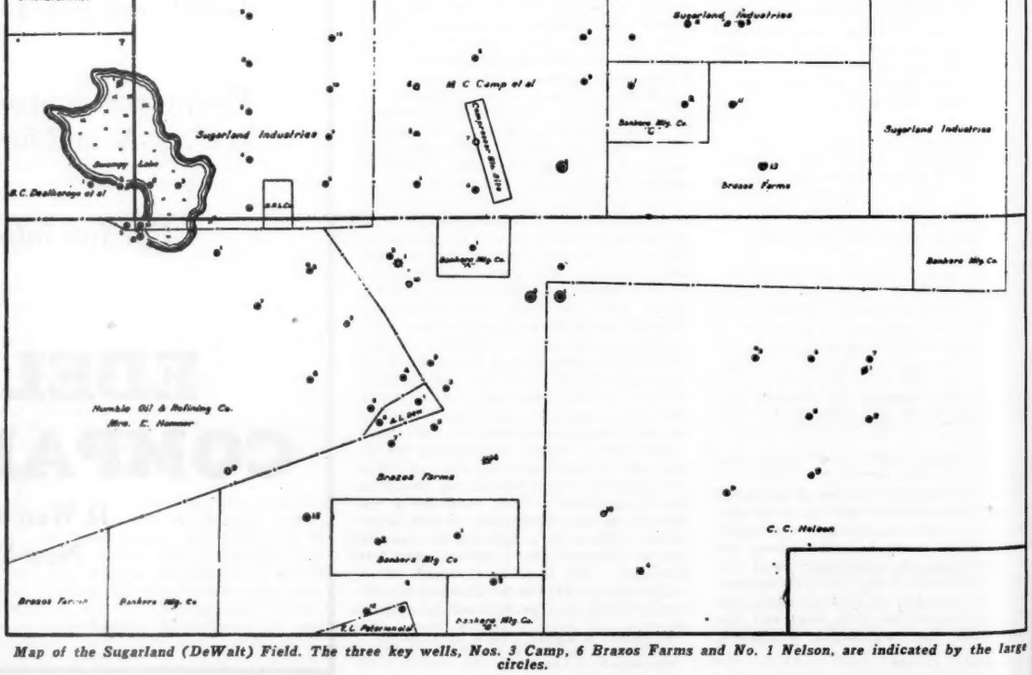
	April	May	Total
Total oil produced (bbls.)	302,335	371,822	674,157
Total gas produced (cu. ft.)	72,836,000	110,733,000	183,569,000
Total gas induced (cu. ft.)	57,053,000	90,814,000	147,867,000
Total fuel	15,783,000	19,919,000	35,702,000
Per cent produced gas returned to formation	74.62	82.01	80.55
Gas-oil ratio	241	298	272
Induced gas-oil ratio	189	244	219
Fuel or lost gas-oil ratio	52	54	53

As Sugarland still is in its flush stages and daily production from the beginning, and now is being held to a uniform flow below the potential output, the results of repressuring as a rejuvenator of production can not be ascertained as in old depleted fields; nor is it possible to make any estimates of the ultimate recovery and life of the field. However, the above tables definitely prove that two objectives of the Sugarland program of production have been realized, namely: The elimination of as much waste as possible of the natural resources; and, second, the utilization of the natural energy in attaining low lifting costs and the maximum economic recovery of oil.

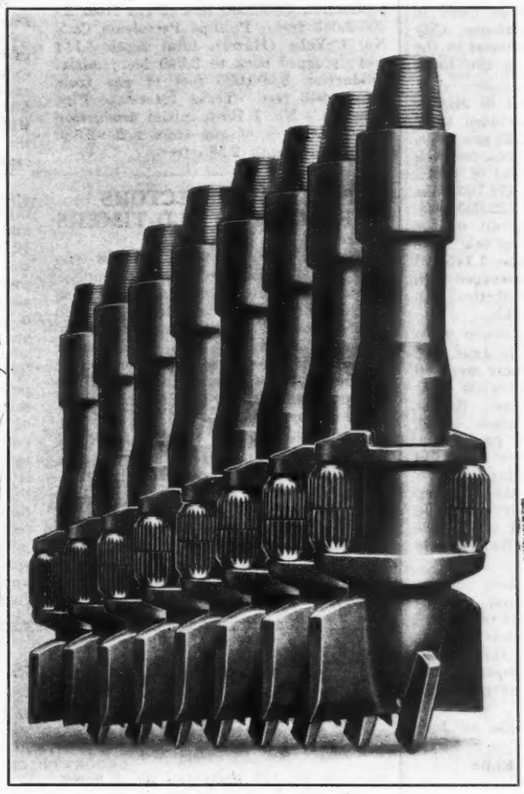
Vast Saving of Gas

Something additional as to the amount of gas conserved with the adoption of repressuring at Sugarland is indicated in the complete report of the amount of gas returned to the sand since experimental work along this line was started. Up to June 1 a total of 207,558,000 feet of gas had been handled by the compressors, 147,867,000 feet being the amount since the permanent plant had been in operation, starting April 2, and 59,691,000 feet being injected in early experimental operation.

One of the handicaps of repressuring efforts in the past has been the exces-



Map of the Sugarland (DeWalt) Field. The three key wells, Nos. 3 Camp, 6 Brazos Farms and No. 1 Nelson, are indicated by the large circles.



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sive cost of boosting gas to injection pressure. This has been due to the fact that generally repressuring has not been attempted until natural pressures in the field have been exhausted or reduced to such a point the entire burden has had to be carried by the compression plant. By the adaptation of repressuring to flush fields, it has been demonstrated that efficient use can be made of the natural pressure at the well to the extent that boosting costs can be placed on an economical basis.

Double Stage Compression

The double stage compression operation in conjunction with single trapping of gas at the wells was adopted at Sugarland as the most economical and efficient method of utilizing the natural gas energy available. Two systems were tried out during the experimental work, namely: The system now in use, and, second, single stage compression with double trapping at the wells. It was found that unless a well produced more than 250,000 feet of gas daily with a pressure of at least 400 pounds, which is not the case in Sugarland, it was better to use the former, that is, deliver the gas to the compressors at around 50 pounds and in a double operation boost it to the required pressure of around 1,350 pounds. By use of double traps, the traps being connected in two stages, the gas was delivered to the compressors at an available well pressure of 400 pounds and in one operation raised to the required pressure.

Gas produced at Sugarland is not of commercial value at present considering its content of hydrogen sulphide, although the gas is being handled in the repressuring operation without serious consequences. However, every piece of equipment is kept thoroughly protected so far as possible against corrosion with suitable paint and the entire system, from the well head, through the traps, gathering lines, headers and to the injection wells, is welded and has been subjected to a cold water test of 3,600 pounds. In the use of the raw field gas for fuel some spark trouble was incurred but otherwise the operation of the engines has not been interfered with seriously. The use of gas from No. 14 Brazos, a dry gas well drilled for this purpose, has eliminated much of the trouble, as previously mentioned, as its hydrogen sulphide content is considerable less than the field gas from oil wells.

Aside from the repressuring phase of Sugarland, the general appearance of the field is one of systematic development and of permanence. Situated in the Brazos River bottoms and subject to overflows, all derricks have been erected on high reinforced concrete foundations. The derrick floors also are of reinforced concrete and derricks are of steel. All well connections, lines, tanks and other equipment are kept up with aluminum paint. Well gravelled roads are maintained to all parts of the field and in every other respect the field is one which is expected to be maintained for years in the future.

TURNER VALLEY PRODUCTION

CHATHAM, Ontario, Aug. 4.—Since the first deep lime producer was drilled in the Turner Valley Field in 1924, the field has yielded 2,518,975 bbls., valued at $8,186,668.75. For three years, 1924 to 1926, Royalite's No. 4 provided the entire yield, reaching its peak in 1927 with 218,000 bbls. Royalite's No. 4 has by far the largest aggregate production in that period, its deliveries to the end of June totaling 952,657 bbls.

W. W. PATRICK DEAD

W. W. Patrick, director of the Foxboro Co., Foxboro, Mass., died recently of pneumonia. Mr. Patrick had been associated with the founders of the company since 1899. In 1908 he became New York district sales manager and he held that position 22 years. He was active in the Association of Scientific Apparatus Makers of America.

July Completions Had High Average Crude Production

The influence of the Hobbs Field in New Mexico and the Oklahoma City Field in Oklahoma was uppermost in the record of completed work in the fields east of California in July.

The 1,785 wells completed in all the fields under consideration included 1,003 oil wells, 548 dry holes and 233 gas wells. The oil wells averaged 860 bbls. per well in initial production, the total of which was 862,951 bbls., of which 474,705 bbls. is credited to Oklahoma and 122,695 bbls. to New Mexico, practically all of the New Mexico total coming from new wells in Hobbs, Lea County. The 1,145 oil wells completed in June averaged 558 bbls. per well in initial production, the total of which was 638,560 bbls.

It is noticeabie that 226 fewer wells were completed in July than in June, and at the close of the month there were 40 fewer rigs up and 164 fewer wells drilling than at the close of June. Recent cuts in the Pennsylvania grade fields, followed by curtailment of production, was accompanied by a severe slump in the drilling of new wells. Many sets of cable tools were stacked in the Allegany and Bradford Fields in July and field work correspondingly slowed up in the southerly areas of the Pennsylvania grade fields.

The effort being made to keep production down to refinery demand has affected drilling everywhere that oil is produced, but it has saved the crude oil market from prices so low that they would have meant great loss to companies and firms with wells of small average production.

Following are the summaries of July field work:

SUMMARY OF ALL FIELDS

Wells Completed

	Comp.	Prod.	Dry	Gas
Eastern	286	1,545	34	49
Central Ohio	81	1,280	21	35
Lima	18	275	4	3
Indiana	21	182	11	4
Michigan	21	2,180	9	1
Kentucky	130	3,521	28	18
Illinois	15	84	7	0
Kansas	70	14,938	32	1
Oklahoma	281	474,705	81	37
North Central Texas	285	19,538	152	8
East Central Texas	27	70,551	10	0
East Texas	2		1	1
West Texas	59	56,900	14	0
Panhandle Texas	53	11,346	1	18
Gulf Coast	171	51,700	67	6
Southwest Texas	102	16,691	40	7
North Louisiana	87	11,719	14	37
Arkansas	13	198	7	1
Montana	20	820	5	5
Wyoming	15	1,853	6	0
Colorado	6	230	3	1
New Mexico	22	122,695	1	1
Total July	1,785	862,951	548	233
Total June	2,011	638,560	590	276
Difference	226	224,391	42	43

Rigs and Wells Drilling

	Rigs	Drlg.	Ttl.
Eastern	66	228	294
Central Ohio	69	184	253
Lima	1	33	34
Indiana	3	45	48
Michigan	70	112	182
Kentucky	7	136	143
Illinois	3	32	35
Kansas	42	236	278
Oklahoma	141	851	992
North Central Texas	57	317	374
East Central Texas	7	29	36
East Texas	8	13	21
West Texas	45	235	280
Panhandle Texas	31	155	186
Gulf Coast	27	201	228
Southwest Texas	116	151	267
North Louisiana	72	124	196
Arkansas	14	37	51
Mississippi	7	27	34
Alabama	2	3	5
Montana	19	102	121
Wyoming	30	111	141
Colorado	18	81	99
New Mexico	25	86	111
Utah	1	29	30
Total July	881	3,558	4,439
Total June	921	3,722	4,643
Difference	40	164	204

PANHANDLE FIELDS

(Continued from Page 72)

feet; initial production 50 bbls.; top pay 2,770-80 feet. The Texas Company's No. 3 Harrah, top pay 3,136 feet; shot 160 quarts from 3,136-3,217 feet; initial production 263 bbls.; total depth 3,245 feet.

Hutchinson County

Phillips Petroleum Co.'s No. 1 Johnson Brothers (Mayer), total depth 3,039 feet; plugged back to 2,683 feet; initial production 7,000,000 feet of gas from 2,-205-2,683 feet. Phillips Petroleum Co.'s No. 1 Yake (Hazel), total depth 3,114 feet; plugged back to 2,940 feet; initial production 3,500,000 feet of gas from 2,750-2,940 feet. Texas Interstate Pipe Line Co.'s No. 1 Bost, initial production 45,000,000 feet of gas from 2,290-2,580 feet; total depth 2,585 feet.

EXPOSITION DIRECTORS REMEMBER OLD-TIMERS

Oil field workers of earlier days who have found themselves without employment as a result of changed conditions in the industry have not been forgotten by the directors of the International Petroleum Exposition, who at a recent meeting voted to set aside 10 per cent of the net cash balance at the end of the year and turn it over to the Old-Timers' fund, now established.

The motion looking to this use of the money was offered by Alf G. Heggem, who pointed out that the exposition is a nonprofit earning institution and that many old-time oil workers are without means of earning a living owing to the revolutionary changes in operating methods and equipment.

Other business of a routine nature was transacted.

MINE BUREAU STUDYING GASOLINE EVAPORATION

By Charles E. Kern

Washington Bureau, The Oil and Gas Journal

WASHINGTON, D. C., Aug. 4.—In a general study of evaporation losses of gasoline, observations on five 12,000-gallon storage tanks have been started as a part of this study at the petroleum experiment station of the Bureau of Mines in Bartlesville, Okla. The tanks will be studied for three months during the hottest part of the year when evaporation is greatest.

The Department of Commerce says a group of five all-steel welded tanks, each tank approximately 10 feet in diameter and 20 feet long with a capacity of about 12,000 gallons, is being studied. Four of the tanks are equipped with 2-ounce pressure relief valves and one-half ounce vacuum relief valves; the fifth tank with a 5-pound pressure relief valve and a one-half ounce vacuum relief valve.

Of the four tanks equipped with the 2-ounce pressure relief valves, one is painted red, the second aluminum, the third is covered with aluminum foil .004 of an inch, while the fourth tank is painted white and partly housed with asbestos sheathing. The fifth tank, which is equipped with the 5-pound pressure relief valve, is painted aluminum. On each tank is mounted an instrument for obtaining a continuous record of the temperatures and pressures in the vapor space of the tank. Each tank contains approximately 8,000 gallons of stabilized gasoline.

WILDCAT OPERATIONS IN WEST TEXAS

(Continued from Page 71)

Sun Oil Co.'s No. 1 First National Bank, C Sec. 6, J. H. Gibson Sur. ..... Shut down 2,869 ft.

CROCKETT COUNTY

Dixie Oil Co. and Amerada's No. 2 Powell, 258 ft. N and 2,349 ft. W of NE cor. of Sec. 42, T.C. Ry., but located in Sec. 52, Blk. BB ..... Location.

Doleman & Moore's No. 1 Perner, 3,135 ft. from N and 1,485 ft. from E of Sec. 36, Blk. 3, I.&G.N. Sur. ..... Spudded and shut down

Magnolia Pet. Co.'s No. 1 Hoover, 2,310 ft. from N and 330 ft. from E of Sec. 12, Blk. 1, G.C.&S.F.R.R. Sur.. Drlg. 5,725 ft.

Magnolia Pet. Co.'s No. 2 Hoover, 2,310 ft. from S and 335 ft. from E of Sec. 2, Blk. FF, B.&B. Sur. ..... Drlg. 250 ft.

G. Schaul's No. 1 Bouscour Est., 330 ft. N and 2,310 ft. from W of Sec. 27, Blk. HH, G.C.&S.F. Sur. ..... Rig up and shut down.

CULBERSON COUNTY

Grisham & Hunter's No. 2 Garren, 2,475 ft. from S and 1,566 ft. from E, Sec. 20, Blk. 89, Public School Land ..... Drlg. 1,250 ft.; show gas 1,250 ft.

Kornrumpf et al's No. 1 Garren, 330 ft. S and W, Sec. 15, Blk. 79, Public School Land ..... Cleaning out 850 ft.

ECTOR COUNTY

C. P. Davis et al's No. 1 Hendricks, C SW, Sec. 46, Blk. 42, Twp. 2s, T.&P.R.R. Sur. ..... Shut down 4,012 ft.

Humble Oil & Ref. Co.'s No. 1 Jones, 330 ft. from S and 423 ft. from W of Sec. 6, Blk. 44, T.&P. Sur. ... Drlg. 1,965 ft.

Independent Oil & Gas Co.'s No. 1 Eidson, 1,250 ft. S and 2,144 ft. E of NW cor., Sec. 6, Blk. 44, Twp. 3s, T.&P. Sur. ..... Shut down 3,800 ft.; 1,000 ft. oil in hole.

H. F. Wurtz' No. 1 E. A. Ibbetson et al, 330 ft. from N and E lines of NW, Sec. 16, Blk. 46, Twp. 3s, G.M.M.Br.&A. Sur. ..... Shut down 2,375 ft.

T. P. Coal & Oil Co.'s No. 1 McKenzie, 1,650 ft. from S and 330 ft. from E of Sec. 282, Blk. 45, Twp. 2s, T.&P. Sur. ..... Shut down 3,870 ft.; swabbing dry.

R. R. Penn et al's No. 1 Goodman et al, 2,640 ft. N and 330 ft. W of SE cor., Sec. 27, Blk. 44, T.&P.R.R. Sur.. Drlg. 4,140 ft.; show gas 4,010 ft.; show oil 4,045 ft.

Simms Oil Co.'s No. 3 University, 2,310 ft. from N and 330 ft. from W of Sec. 1, Blk. 35 ..... Shut down 3,250 ft.

Skelly Oil Co. and Republic Prod. Co.'s No. 1 McKenzie, 990 ft. from S line and 330 ft. from E line of Sec. 28, Blk. 45, Twp. 2s, T.&P. Sur. ..... Shut down 3,750 ft.; flowed 116 bbls. on July 12; shut in for storage.

Skelly Oil Co. et al's No. 1-C University, 2,310 ft. from N and W of Sec. 2, Blk. 35 ..... Drlg. 1,375 ft.

Sunray Oil Co. et al's No. 1 Jones, 2,330 ft. from N and 440 ft. from E of Sec. 6, Blk. 44, Twp. 3s, T.&P. Sur.. Plugged back to 3,812 ft.; well now dead.

The Texas Company et al's No. 8 Connell, 330 ft. from S and 440 ft. from E of Sec. 2, Blk. B-16 ..... Top pay 3,498 ft.; shot 300 qts. 3,480-3,596 ft.; flowed 300 bbls. 14 hrs.; estimated 100-bbl. well.

EL PASO COUNTY

Lane-The Texas Company's No. 1 Malone, 2,110 ft. from SW and NW of Sec. 46, J. M. Day Sur. ..... Shut down 3,089 ft.

FISHER COUNTY

Cranfill & Reynolds' No. 2 Barrett, 330 ft. from N and W of NE, Sec. 199, B.B.B.&C. Sur. ..... Underreaming 6¾-in. casing 3,070 ft.

Cranfill & Reynolds' No. 2 Flannigan, 330 ft. from S and E of W half of Sec. 200, B.B.B.&C.R.R. Sur. .... Drlg. 2,605 ft.

Mid-West's No. 1 Decker, 330 ft. from S and W of W 80 ac. of N 160 ac., Sec. 8, Richardson Sur. ..... Underreaming 8¼-in. casing 2,945 ft.

Roeser & Pendleton's No. 1 Steele, 660 ft. from N and 440 ft. from W of N half of SW, Sec. 210, B.B.B.&C. Sur. ..... Show gas 1,845-65 ft.; drlg. 3,030 ft.

The Texas Company's No. 1-A Teagarden, 150 ft. from S and 420 ft. from E of Sec. 8, Richardson Sur. ..... Drlg. 2,895 ft.

GAINES COUNTY

Humble Oil & Ref. Co.'s No. 1 Carswell, 660 ft. S and E of NW cor. of Sec. 23, Blk. A-37, Public School Land.. Drlg. 4,770 ft.

GARZA COUNTY

Pandem Oil Corp.'s No. 1 Justice, 330 ft. from S and W of Sec. 12, Blk. 4, H.&G.N. Sur. ... Spudded and shut down.
Richard's No. 1 Stoker, 330 ft. from N and W, Sec. 2, Blk. 2, G.H.&H. Sur. ... Underreaming 3,044 ft.

GLASSCOCK COUNTY

Timberlake & Snyder's No. 1 Meek, 2,310 ft. W and 1,600 ft. N of SE cor., Sec. 7, Blk. 34, Twp. 3s, T.&P. Sur. ... Total depth 2,956 ft.; fishing casing.
World Oil Co.'s No. 3-C McDowell, 2,310 ft. from S and W of NE cor., Sec. 21, Blk. 34, Twp. 2s, T.&P. Sur. ... Shut down 660 ft.

HOWARD COUNTY

Cosden Oil Co.'s No. 6 Roberts-A, 200 ft. N and E of SW cor., Sec. 129, Blk. 29, W.&N.W.R.R. Sur. ... Sulphur water 1,433-46 ft.; shut down 1,456 ft.
Greene O. & R. Co. et al's No. 1 Drumon, 330 ft. from N and W of E half of NE, Sec. 14, Blk. 30, Twp. 1s, T.&P. Sur. ... Derrick.
Merriwether's No. 1 Smith, 150 ft. from S, 2,490 ft. from W, Sec. 45, Blk. 33 ... Cleaning out 2,880 ft.
Moody Oil Corp.'s No. 23-B Roberts, 990 ft. from N and W of Sec. 137, Blk. 29 ... Shut down 261 ft.

HUDSPETH COUNTY

California Co.'s No. 1 University, 3,821 ft. N and 2,554 ft. E of SW cor., Sec. 19, Blk. E ... Plugging to abandon; total depth 4,848 ft.
Western States Oil Co.'s No. 1 Gardner & Moseley, NE NW, Sec. 12, Blk. 18 ... Fishing 3,155 ft.
Williams & Williams Drlg. Co.'s No. 1 Noelke, 200 ft. from N and 1,020 ft. from E of Sec. 8, City of San Antonio Sur. ... Machine.

IRION COUNTY

Crawford Oil Co.'s No. 1 Williams, 450 ft. from N, 150 ft. from W, Subd. 8 ... Shut down 1,105 ft.
Cromwell et al's No. 1 Tankersley, 150 ft. from N and 210 ft. from W of E half of Sec. 1,330, G.C.&S.F. Sur. ... Shut down 1,025 ft.
Cromwell et al's No. 2 Tankersley, 200 ft. from N and 150 ft. from W of Sec. 1,219, T.C.R.R. Sur. ... Shut down 1,633 ft.
Straughn & Texannati Oil Co.'s No. 3 Nutt, 804 ft. from N and 150 ft. from W of NE cor. of NW, Blk. 6, Gonzales Co. School Land ... Drlg. 725 ft.
P. H. Williams' No. 1 Ash, C of Sec. 20, Washington County ... Show oil 7,931 ft.; shut down 8,-890 ft.; may drill deeper.
Webb et al's No. 1 Nutt, 150 ft. from S and 116 ft. from W of Blk. 5, Gonzales Co. School Land ... Location.

JONES COUNTY

Gibson & Johnson's No. 1 Hudspeth, 1,125 ft. from N and 483 ft. from E of Sec. 22, Edward Miles Sur. ... Shut down 2,575 ft.; 600 ft. oil and water in hole; top pay 2,542 ft.
Pope et al's No. 1 Swann, 2,023 ft. from S and 400 ft. from E of I. Miley Sur. No. 281 ... Rigging up.
Shabeen et al's No. 1 King, 6,750 ft. from N and 150 ft. from E of M. Bueno Sur. No. 197 ... Total depth 1,995 ft.; top pay 1,989 ft.; 1,450 ft. oil in hole in 24 hrs.; estimated good for 50-bbl. well.

KENT COUNTY

White & Smith's No. 1 Pursley estate, 1,320 ft. from E and 2,640 ft. from S of Sec. 8, Blk. H, H.&T.B. Sur. ... Shut down 273 ft.

LAMB COUNTY

Graham Oil & Gas Co.'s No. 1 Ellwood, CWL, Sec. 9, Blk. T, T. A. Thompson Sur. ... Shut down 4,428 ft.

LOVING COUNTY

Dixie and Phillips Pet.'s No. 1 Johnson, 1,320 ft. from N and E of Sec. 38, Blk. 54, Twp. 2s, T.&P. Sur. ... Drlg. 4,142 ft.
Eppenauer et al's No. 1 Allen, 2,310 ft. from NE and NW lines, Sec. 90, Blk. 1, W.&N.W. Sur. ... Spudded and shut down.
Lockhart & Co.'s No. 3 Bowen & Wells, 330 ft. from NE and SE of Sec. 92, Blk. 1, W.&N.W. Sur. ... Shut down 3,383 ft.
Hadlock et al's No. 2 Russell, 1,650 ft. SW of NE line, 2,310 ft. NW of SE line, Sec. 80, Blk. 1, W.&N.W. R.R. Sur. ... Cleaning out 4,280 ft.; 2,500 ft. oil in hole.
Henshaw et al's No. 1 Reagan & McElvain, 990 ft. from SE and 330 ft. from SW, Sec. 84, Blk. 1, W.&N.W. Sur. ... Rig up.
Lockhart & Co.'s No. 2 fee, 676 ft. S, 330 ft. W, Sec. 91, Blk. 1, W.&N.W. Sur. ... Spudded 140 ft.; shut down.
Lockhart & Co.'s No. 3 Hubbard, 1,650 ft. from NE line, 330 ft. NW line of Sec. 83, Blk. 33, H.&T.C.R.R. Sur. ... Rigged up and shut down.
Lockhart's No. 2 Wheat & Ramsey, 440 ft. from NE and 880 ft. from NW, Sec. 83, Blk. 1, W.&N.W. Sur. ... Drlg. 2,705 ft.
Miller et al's No. 1 Chapman, 225 ft. from NW and 285 ft. from SW line, Sec. 71, Blk. 1, W.&N.W. Sur. ... Shut down 1,500 ft.
Rush et al's No. 1 Wheat, 1,650 ft. from NW and 330 ft. from SW of Sec. 85, Blk. 1, W.&N.W. Sur. ... Drlg. 1,700 ft.
California Co.'s No. 2 Reagan & McElvain, 440 ft. from NW and SW, Sec. 84, Blk. 1, W.&N.W. Sur. ... Drlg. 2,190 ft.
California Co.'s No. 4 Reagan & McElvain, 330 ft. from NE and 1,650 ft. from NW, Sec. 84, Blk. 1, W.&N.W. ... Fishing 594 ft.
Lee O. White et al's No. 1 Russell et al, 320 ft. from NW and 2,200 ft. from SW, Sec. 80, Blk. 1, W.&N.W. ... Drlg. 625 ft.

LYNN COUNTY

George McCamey's No. 1 Edwards, 165 ft. N and E, Sec. 5, Blk. 2, L.S.&W. Sur. ... Drlg. 5,260 ft.

MENARD COUNTY

Barnett et al's No. 3 Callan City Co., 300 ft. from S and W, Sec. 1, H.S.&F. Sur. ... Show oil 709-11 ft.; drlg. 1,150 ft.
Panhandle Ref. Co.'s No. 2 Eckhart, 1,320 ft. from W and 1,320 ft. from S of Sec. 10, Blk. 2, T.W.N.G. Sur. ... 500,000 ft. gas with show oil 2,945 ft.; drlg. 3,015 ft.; 1,800 ft. water in hole.
Priest's No. 1 Sorrell, 1,000 ft. from E and 200 ft. from S cor., Sec. 132, E.L.R.R. Sur. ... Fishing tools 2,415 ft.

MITCHELL COUNTY

Morrison et al's No. 2 Morrison, 2,390 ft. from N and 660 ft. from E of Sec. 31, Blk. 28, Twp. 1n, T.&P. R.R. Sur. ... Total depth 3,112 ft.; top pay 3,038 ft.; 1,000 ft. oil in hole; swabbing 40 bbls. in 24 hrs.
Morrison et al's No. 1 Poe et al, 660 ft. S and 1,980 ft. W parallel to section lines of NE cor., Sec. 8, Blk. 27, T.&P. Sur. ... Spudded 10 ft. and shut down.

PECOS COUNTY

Barnes et al's No. 1 Sanford, 160 ft. from NW and 157 ft. from SW of Sec. 55, Blk. 10, H.&G.N. Sur. ... Drlg. 606 ft.
Black et al's No. 1 Pecos Valley Oil Co., 1,120 ft. from SE and 1,420 ft. from SW, Sec. 34, Blk. 3, H.&T.C. Sur. ... Shut down 1,250 ft.
Curry & Eakin's No. 1 Pecos Valley Oil Co., 1,050 ft. from SE and 1,470 ft. from SW, Sec. 36, Blk. 3, H.&T.C. Sur. ... Location.
G. A. Henshaw, Jr., Inc.'s No. 1 University, 1,650 ft. from S and 990 ft. from E, Sec. 32, Blk. 16 ... Drlg. 750 ft.
Humble Oil & Ref. Co.'s No. 1 Kokernot, 1,320 ft. from N line and 1,467 ft. from W line of Sec. 227, Blk. 10, G.H.&S.A. Sur. ... Drlg. 2,438 ft.
Humble Oil & Ref. Co.'s No. 1-B Thoman, 1,608 ft. from N and 4,062 ft. from E of Sec. 98, Blk. OW, G.C.&S.F. Sur. ... Location.
Hussman Oil Co.'s No. 1 Esters, 960 ft. from N and 300 ft. E, Sec. 83, Blk. OW, T.M.R.R. Sur. ... Shut down; show oil 1,500-65 ft.; total depth 1,680 ft.
Independent O. & G. Co.'s No. 4 McDonald, 115 ft. from N and 2,485 ft. from E, Sec. 46, Blk. 12, H.&G.N. ... Drlg. 1,635 ft.
Magnolia Pet. Co.'s No. 1 Byrne, 2,490 ft. from SE and SW, Sec. 54, Blk. 10, H.&G.N. Sur. ... Drlg. 111 ft.
McCurdy & Brown's No. 1 Tippett, 1,150 ft. from S and 150 ft. from W of SE, Sec. 40, Blk. 197, G.C. &S.F. Sur. ... Drlg. 206 ft.
McCurdy & Brown's No. 2 Tippett, 150 ft. from N and W of SE, Sec. 40, Blk. 194, G.C.&S.F. ... Location.
Messenger et al's No. 2 Byrne, 2,490 ft. from NE and SE of Sec. 54, Blk. 10, H.&G.N. Sur. ... Shut down 1,367 ft.; top pay 1,364 ft.; flowing 93 bbls. daily.
Messenger et al's No. 1 Butz, 1,830 ft. from NW and 1,170 ft. from SW, Sec. 54, Blk. 10, H.&G.N. Sur. ... Shut down 740 ft.
J. R. Miller et al's No. 1 Bennett, 359 ft. W from CWL, Sec. 1, Blk. 119, G.C.&S.F. ... Shut down 1,700 ft.
J. D. O'Mara's No. 1 Bennett, Sec. 593, 1,460 ft. from S, 150 ft. from E, G.C.&S.F. ... Total depth 1,230 ft.; top pay 1,089 ft.; plugged back to 1,185 ft.; will drill deeper.
J. D. O'Mara's No. 1 Streety, C of Sec. 1, W.P. Howard Sur. ... Underreaming 2,200 ft.
Oregon Oil Corp.'s No. 2 Yates, 150 ft. from S and W of Sec. 58, Blk. 1, I.&G.N. Sur. ... Drlg. 2,055 ft.
Peren Oil Co.'s No. 2 Eaton, C of E of W, Sec. 27, Blk. 3, H.&T.C. Sur. ... Shut down 1,324 ft.
Perren's No. 1 Jackson, 200 ft. from NW and SW of Sec. 28, Blk. 3, H.&T.C. Sur. ... Shut down 1,445 ft.
Plymouth Oil Co.'s No. 1 Perry, 330 ft. from N and W Sec. 13, Blk. 194, G.C.&S.F. ... Drlg. 1,685 ft.
Plymouth Oil Co.'s No. 4 Perry, 300 ft. from N and 420 ft. from E, Sec. 14, Blk. 194, G.C.&S.F. Sur. ... Cellar.
R. W. Porpus et al's No. 1 State Land, 330 ft. S and W lines of NE, Sec. 28, Blk. OW, T.C.R.R. Sur. ... Spudded and shut down.
Pure Oil Co.'s No. 1 Harrison, 2,310 ft. from N and 330 ft. from W of Sec. 203, Blk. 3, T.&P. Sur. ... Drlg. 1,153 ft.
Riser & White's No. 1 Riser, 2,297 ft. from S and 997 ft. from E of Sec. 24, Blk. 12, H.&G.N. Sur. ... Shut down 90 ft.
Sides & Cloyd's No. 2 Blackstone & Slaughter, C NW of Sec. 34, Blk. A-2, T.&C.R.R. Sur. ... Shut down 2,070 ft.
California Co.'s No. 1 Fromme, 330 ft. from NE and NW, Sec. 106, Blk. 10, H.&G.N. Sur. ... Shut down 1,630 ft.
California Co. et al's No. 1 Thomas, 990 ft. from NW and SW, Sec. 31, Blk. 34, H.&T.C. Sur. ... Location.
The Texas Company's No. 1 Wright, 660 ft. S and E of NW cor., Sec. 9, Blk. 131, T.&St.L. Sur. ... Shut down 3,504 ft.
Warner's No. 1 Webb, 2,550 ft. from NW and 6,100 ft. from NE of Sec. 311, Abst. 756, C. McGinley Sur. ... Rig up.
Webb's No. 3 fee, 1,900 ft. from W and 223 ft. from S, Sec. 106, Blk. OW, G.C.&S.F. Sur. ... Shut down 595 ft.

PRESIDIO COUNTY

L. C. Brite's No. 4 Brite, 271 ft. from N and 1,188 ft. from E lines of Sec. 245, Blk. 4 ... Shut down 2,630 ft.

REAGAN COUNTY

Big Lake Oil Co.'s No. 1-C University, 2,598 ft. S and 250 ft. W of NE cor., Sec. 1, Blk. 2, University Land ... Flowed 1,016 bbls. 24 hrs. ending July 29; total depth 8,668 ft.
Big Lake Oil Co.'s No. 4-C University, 1,120 ft. from N and 1,096 ft. from E of Sec. 1, Blk. 2 ... Top pay 8,220 ft.; total depth 8,220 ft.; well killed.
Big Lake Oil Co.'s No. 5-C University, 625 ft. from S and 250 ft. from W of Sec. 25, Blk. 9 ... Shut down 2,400 ft.
Texon Oil & Land Co.'s No. 3-B University, 2,240 ft. from S, 920 ft. from W. Sec. 36, Blk. 9 ... Total depth 8,633 ft.; flowed 1,353 bbls. 24 hrs.; flowed 1,280 bbls. 24 hrs. ending July 29.

REEVES COUNTY

H. T. Hansford's No. 1 Williams, 150 ft. from S and W, Sec. 17, Blk. 6, H.&G.N. Sur. ... Shut down 330 ft.
Black & Fink's No. 1 Brooks, 1,980 ft. N and 660 ft. W, Sec. 16, Blk. 50 ... Shut down 1,860 ft.; show oil 1,820 ft.; cleaning out after two shots; filled up 200 ft. with oil.
Salsbury & Gregory's No. 1 Young Bell, 1,170 ft. from N and 330 ft. from E of Sec. 7, Blk. 5, H.&G.N. ... Shut down 260 ft.
Lee O. White et al's No. 1 Hershorson, 330 ft. from N and W lines of Sec. 5, Blk. 51, Twp. 10, T.&P. Sur. ... Drlg. 3,984 ft.
California Co.'s No. 1 Kloh & Rumsey, 1,650 ft. from S and E of Sec. 13, Blk. 54, Twp. 4, T.&P. Sur. ... Drlg. 2,995 ft.

RUNNELS COUNTY

Dutton et al's No. 1 Dean, 5,475 ft. from NE and 1,044 ft. from NW in J. Heil Sur. No. 419 ... Show oil 2,302-95 ft.; gas pocket 2,303 ft.
Gibson & Johnson's No. 2 Serratt, 2,310 ft. from S and 1,650 ft. from E of Sec. 150, E.T.R.R. Sur. ... Derrick.
George W. Boyce's No. 1 Lang, 2,310 ft. N, 6,900 ft. E, Sec. 262 ... Show oil 2,028 ft.; shut down 2,643 ft.

SCHLEICHER COUNTY

Delmar Oil Co.'s No. 1 O'Harrow, C of NW, Sec. 56, Blk. 1, G.H.&S.A.R.R. Sur. ... Shut down 4,060 ft.
Interstate's No. 1 Whitten, 1,320 ft. from N and W, Sec. 35, Blk. LL, T.C.R.R. Sur. ... Plugged back to shoot; show gas and oil 6,305-37 ft.; total depth 6,880 ft.
Teas & Gant's No. 1 Allison, 1,320 ft. N and E of SW cor. of Sec. 37, Blk. K, G.H.&S.A.R.R. Sur. ... Shut down 2,395 ft.
Wesner et al's No. 1 Nicks, 2,310 ft. from N and 2,362 ft. from E of Sec. 77, Blk. LL, T.C.R.R. Sur. ... Shut down 750 ft.
Westyde et al's No. 1 Meador, 1,320 ft. from S and E of Sec. 661, G.C.&S.F. Sur. ... Location.
George Wilson's No. 1 Page, Sec. 40, Blk. L, 1,290 ft. from N, 1,470 ft. from W. G.H.&S.A.R.R. Sur. ... Fishing 4,912 ft.

SCURRY COUNTY

Byrd & Harmon's No. 1 Murphy, Jr., 320 ft. from N and E of Sec. 114, Blk. 97, H.&T.C. Sur. ... Drlg. 3,362 ft.
Camp Spring Oil & Ref. Co.'s No. 3 Guinn, 1,300 ft. from S, 300 ft. from E, Sec. 12, Blk. 3, H.&T.C.R.R. Sur. ... Shut down 4,373 ft.
Camp Spring Oil Co.'s No. 1 Strayhorn, 330 ft. from S and 1,980 ft. from W of Sec. 154, Blk. 3, H.&G.N. ... Shut down 471 ft.
I. B. Mimms et al's No. 1 J. J. Koonsman, Sec. 216, Blk. 2, H.&T.C.R.R. Sur. ... Spudded and shut down.
G. E. Dickman and R. B. Pender et al's No. 1 F. C. Davis, 1,000 ft. N and 1,770 ft. W of SE cor. of Sec. 275, Blk. 2, H.&T.C. Sur. ... Drlg. 4,712 ft.
Transcontinental Oil Co.'s No. 1 Peckham, 330 ft. from S and W of R. N. Miller Sur. ... Drlg. 3,225 ft.

STERLING COUNTY

Mann et al's No. 1 Reed, 330 ft. from N and 2,310 ft. from W, Sec. 16, Blk. 14, S.P.R.R. ... Drlg. 2,000 ft.

SUTTON COUNTY

Independent Oil & Gas Co.'s No. 1 Wilson, Sec. 30, Blk. A, 1,650 ft. from N, 2,310 ft. from W ... Location.

TAYLOR COUNTY

Clark et al's No. 1 Kendall, 250 ft. from N and W of farm in Willis Avery Sur. ... Drlg. 1,710 ft.
Eastland Oil Co.'s No. 1 Hunter, 1,574 ft. from E and 3,418 ft. from S of William R. Ellis Sur. ... Drlg. 565 ft.
Gibson & Johnson's No. 1 Bingham, 330 ft. N and E of SW cor. their 270.8-acre tract, Sec. 31, Guadalupe County School Land ... Drlg. on underreamer lugs 2,388 ft.
John B. Jameson's No. 1 Webb, 1,170 ft. S and W of NE cor., Sec. 46, Lunatic Asylum Land ... Show oil 4,917 ft.; drlg. 6,008 ft.
Hucony Oil Co. et al's No. 1 Richie, C SE, Sec. 10, Blk. A, S.P.R.R. Sur. ... Shut down 1,080 ft.
Sanger et al's No. 1 City of Abilene, 830 ft. from S and 1,406 ft. from E of Sec. 66, Blind Asylum Lands ... Rigging up.

TERRELL COUNTY

Big Bend Oil Co.'s No. 1 Bassett, C NW, Sec. 155, Blk. D, M.-K.-T.R.R. Sur. ..... Shut down 2,180 ft.

Keck Pecos Trust Co.'s No. 1 Hamilton, C, Sec. 6, Georgetown Ry. Sur. ..... Shut down 3,150 ft.

Miller Bros.' No. 1 Allison & Burke, C NW cor., Sec. 10, Blk. 176, T.&P. Sur. ..... Shut down 120 ft.

Mrs. J. B. McPhees' No. 1 Sam Belt, C, Sec. 17, Blk. D-7, E.L.R.R. Sur. ..... Shut down 880 ft.; moved off machine.

Transcontinental Oil Co.'s No. 1 Goode, 2,152 ft. from E and 330 ft. from S, Sec. 26, Blk. 161, G.C.&S.F.R.R. Sur. ..... Shut down 5,200 ft.

Woodley & Jones' No. 1 Pankenham, C SE NW, Sec. 43, Blk. B-2, C.C.S.D.&N.G.R.R. Sur. ..... Shut down 640 ft.

TERRY COUNTY

Atlantic et al's No. 1 Carlisle, 990 ft. from S and E of Sec. 58, Blk. E, E.L.&R.R. Sur. ..... Fishing 5,001 ft.

TOM GREEN COUNTY

Cosden Oil Co.'s No. 1 William Anson, 2,310 ft. S, 330 ft. W of NE cor., Sec. 20, Blk. 24, H.T.C.R.R. Sur. ..... Location.

Ellis' No. 3 Lewis, 1,350 ft. S and 450 ft. E of SW cor. Jas. Webb Sur. 77, but in Albert Black Sur. 75 ..... Shut down 1,101 ft.

Fitzgerald & Taliaferro's No. 1 Bennett, C SW, Sec. 1,628, E. H. Dinger Sur. ..... Plugged back to 2,405 ft. to straighten hole; shut down 2,447 ft.

Mintex Oil Co.'s No. 1 Campbell Est., 446 ft. from S and 630 ft. from W of Sec. 180, Dist. No. 11, S.P.R.R. Sur. ..... Shut down 422 ft.

Phillips Pet. Corp.'s No. 1 Gulden, 1,250 ft. from N and 1,583 ft. W of Sec. 77, James Webb Sur. ..... Fishing for tools 3,275 ft.

E. W. Wiley et al's No. 1 Maier, 200 ft. from E, 110 ft. from N, Sec. 6, Blind Asylum Land ..... Show oil 418-20 ft.; total depth 632 ft.

UPTON COUNTY

Cordova Union Land Co.'s No. 1 fee, 330 ft. from S and E line of Sec. 1, Blk. 1, M.-K.-T.R.R. Sur. ..... Location.

Eppenauer Drlg. Co.'s No. 3 Chaney, 1,147 ft. from N and 990 ft. from W. Sec. 18, Blk. 3, M.-K.-T. Sur. ... Junked and abandoned; total depth 2,475 ft.; to run 2-in. tubing and test.

VAL VERDE COUNTY

A. Bluhm's No. 1 Yoast, 1,760 ft. N, 600 ft. W of SE cor., Sec. 31, Blk. 3, I.&G.N. Sur. ..... Location.

Independent Operators' No. 1 Whitehead, SE SE, Sec. 30, Blk. 4, I.&G.N. Sur., elev. 1,175 ft. ..... Shut down 5,360 ft.

O. O. Owen's No. 1 Mills, Sec. 128, Blk. 1, I.&G.N. Sur., elev. 2,130 ft. ..... Drlg. 6,410 ft.

Phantom Oil Co.'s No. 1 Ingram, 175 ft. W of E line and 300 ft. N of S line, Sec. 33, Blk. D-8, E.L.&R.R. Sur. .. Show oil 1,525 ft.; fishing 3,025 ft.

Valvert Oil Corp.'s No. 1 Bassett, C NE, Sec. 47, Blk. Y. Shut down 4,009 ft.

WARD COUNTY

Bradford et al's No. 1 Murry, 1,782 ft. from NW and 2,157 ft. from SW, Sec. 11, Blk. 5, H.&T.C. Sur. ..... Drlg. 240 ft.

Gulf Prod. Co.'s No. 3 Wristen Bros., 220 ft. NE of SW and 220 ft. SE of NW, Sec. 18, Blk. 5, H.&T.C. Sur. .. Show gas 1,960-70 ft.; filling up with sulphur water 2,520-27 ft.; salt water 2,545 ft.; plugged back to 2,477 ft.

R. F. Owens' No. 1 Johnson, 100 ft. from NE and 1,100 ft. from SE of Sec. 8, Blk. 33, H.&T.C.R.R. Sur. ..... Shut down 600 ft.

Penn and Atlantic's No. 1-B Pecos Mercantile Co., 990 ft. from NW and 2,310 ft. from NE, Sec. 16, Blk. 34, H.&T.C. Sur. ..... Drlg. 2,240 ft.

Richardson et al's No. 4 O'Brien et al, 330 ft. from N and 2,340 ft. from W, Sec. 5, Blk. F, G.M.M.B.&A. ... Drlg. 160 ft.

Tex-Oil Prod. Co.'s No. 1 Redman, 1,980 ft. NE of SW line and 1,980 ft. SE of NW line, Sec. 152, Blk. 34, H.&T.C.R.R. Sur. ..... Shut down 5,077 ft.; show oil 5,070 ft.; shot 140 qts. from 5,047-77 ft.; no results.

Shipley et al's No. 5 Hayzlett, assume common line Secs. 16 and 17 is N and S, 220 ft. S and 1,910 ft. W, Sec. 17, Blk. 5 ..... Standard rig.

Shipley et al's No. 1 Monroe, 330 ft. SE SW Sec. 3, Blk. 1 ..... Shut down 1,890 ft.

J. E. Smith's No. 1 Clement, 152 ft. SW of NE line and 153 ft. SE of NW line, Lot 7, Sec. 7, Blk. 32, H.&T.C.R.R. Sur. ..... Shut down 2,230 ft.; estimated 1,000,000 ft. gas; flowed 8 bbls. oil and 30 bbls. water per day

WINKLER COUNTY

Atlantic & Maxwell's No. 1 Daugherty, 1,650 ft. from S and 2,310 ft. from E. Sec. 16, Blk. 74, Public School Land ..... Drlg. 1,500 ft.

Magnolia Pet. Co.'s No. 3 Scarborough, 1,650 ft. from N and 990 ft. from W of Sec. 1, Blk. 77, Public School Land ..... Location.

A. W. Phillips' No. 2 Brown et al, 2,000 ft. S and W of NE, Sec. 4, Blk. B-5, Public School Land ..... Shut down 3,120 ft.

Liner Drlg. Co.'s No. 1 Campbell, 330 ft. from N and E cor., Sec. 2, Blk. B-5 ..... Shut down 4,250 ft.

Shell and The Texas Company's No. 1-B Cowden, 600 ft. from S and W of Sec. 39, Blk. B-5, Public School Land ..... Top of pay 2,585 ft.; oil and gas 3,100-16 ft.; flowing 124 bbls. fluid per day, 40 per cent water.

Simms Oil Co.'s No. 1 Sealy, C of SE, Sec. 49, Blk. F, G.M.M.B.&A. Sur. ..... Drlg. 2,120 ft.

WILDCAT OPERATIONS IN TEXAS PANHANDLE

(Continued from Page 72)

GRAY COUNTY

Amalgamated German-American Oil Co.'s No. 1 Webb, 330 ft. S and W, E½ NW, Sec. 12, Blk. A-9, H.&G.N. Sur. ..... S.D. 1,200 ft.

Cockrell-McIlroy Oil Co.'s No. 1 Baer, 330 ft. S and W, NE, Sec. 126, Blk. 3, I.&G.N. Sur. ..... Drlg. 2,381 ft.

Cockrell-McIlroy Oil Co.'s No. 1 Allam, 330 ft. N and E of E½ NE, Sec. 127, Blk. 3, I.&G.N. Sur. ..... Drlg. 3,100 ft.

Cockrell-McIlroy's No. 1 Horner, 330 ft. S and E, NE, Sec. 139, Blk. 3, I.&G.N. Sur. ..... Drlg. 2,835 ft.

Cockrell-McIlroy Oil Co.'s No. 1 Jackson, 330 ft. N and E of E 110 ac., SE, Sec. 138, Blk. 3, I.&G.N. Sur.. Drlg. 860 ft.

Continental Oil Co.'s No. 1 Wright, 330 ft. S and W, NW, Sec. 13, Blk. 3, I.&G.N. Sur. ..... Drlg. 2,700 ft.

Continental Oil Co.'s Combs & Worley, 330 ft. S and E, NE, Sec. 38, Blk. 3, I.&G.N. Sur. ..... Drlg. 1,590 ft.

Danciger O. & R. Co.'s No. 2 Bradford, C SW NE, Sec. 148, Blk. B-2, H.&G.N. Sur. ..... S.D. 2,311 ft.

Danciger O. & R. Co.'s No. 1 Catlin et al, 175 ft. S, 300 ft. E of N 71 ac. of E 231 ac., Sec. 57, Blk. 3, I.&G.N. Sur. ..... S.D. 2,964 ft.

Danciger O. & R. Co.'s No. 5 Morse, 330 ft. N and E, SW SW NW, Sec. 1, Blk. 26, H.&G.N.R.R. Sur. ..... Drlg. 2,560 ft; S.O. 2,545-60 ft.

Dye & Gillette's No. 1 McConnell, 330 ft. N and W, W½ SE, Sec. 187, Blk. 3, I.&G.N. Sur. ..... Location.

Empire G. & F. Co.'s No. 1 Crow, 875 ft. N and W, NE, Sec. 137, Blk. 3, I.&G.N. Sur. ..... Drlg. 2,295 ft.

Empire G. & F. Co.'s No. 1 Sailor, 330 ft. S and W, NE, Sec. 138, Blk. 3, I.&G.N. Sur. ..... S.D. 2,600 ft.

Gardner Bros. and Collins' No. 2 Saunders, 955 ft. S, 330 ft. E of W 68 ac., E½, J. G. Eustice Sur. ..... Location.

Dick Graham's No. 1 Sullivan, 792 ft. N and W, Sec. 136, Blk. 3, I.&G.N. Sur. ..... Spudding.

Jewell Oil Co.'s No. 1 Harrah, 330 ft. N and W, of W 40 ac., S 120 ac., E 240 ac., Sec. 163, Blk. 3, I.&G.N. Sur. ..... Drlg. 3,275 ft; S.O. 3,185 ft; increase at 3,260 ft.

Jean Pet. Co.'s No. 1 Furneaux Bros., 330 ft. N and W cor. SE, Sec. 200, Blk. B-2, H.&T.N. Sur. ..... S.D. 2,050 ft.

Magnolia Pet. Co.'s No. 1 Cubine, 330 ft. N and W, NE, Sec. 36, Blk. 25, H.&G.N.R.R. Sur. ..... 9,000,000 ft. gas 2,325-35 ft; S.D. 2,775 ft.

Magnolia Pet. Co.'s No. 1 Sailor, 990 ft. S, 330 ft. W, E½ NE, Sec. 138, Blk. 3, I.&G.N. Sur. ..... Drlg. 2,220 ft.

Magnolia Pet. Co.'s No. 2 Sailor, 330 ft. S and W, E½ NE, Sec. 138, Blk. 3, I.&G.N. Sur. ..... Cellar.

McAuley et al's No. 4 Morse, 330 ft. N and W, SE cor. NE, Sec. 2, Blk. 26, H.&G.N.R.R. Sur. ..... Drlg. 2,537 ft.

Midwest Explin. Co.'s No. 1 Cobb, 1,320 ft. W, 400 ft. S, NW, Sec. 165, Blk. 3, I.&G.N. Sur. ..... Rigging up.

Midwest Explin. Co. et al's No. 1 Waggoner, 1,320 ft. W, 330 ft. N, Sec. 173, Blk. 3, I.&G.N. Sur. ..... S.D. 2,410 ft.

Nelson et al's No. 1 Crews, 330 ft. S and E, NW, Sec. 12, Blk. 25, H.&G.N. Sur. ..... S.D. 2,385 ft; 1,000,000 ft. gas 2,295-2,354 ft.

Prairie O. & G. Co.'s No. 1 Carey, 372 ft. W, 330 ft. N, Sec. 114, Blk. 3, I.&G.N. Sur. ..... Drlg. 3,215 ft.

Saulsbury et al's No. 1 Sheridan, 330 ft. S and E, W½ NE, Sec. 184, Blk. B-2, H.&G.N. Sur. ..... S.G. 2,805-15 ft; S.O. 2,835-45 ft; S.D. 3,095 ft; 600 ft. oil in hole 3,035-37 ft.

W. A. Scott's No. 1 Cobb, 330 ft. S, 425 ft. W, N½ SE, Sec. 184, Blk. 3, I.&G.N. Sur. ..... S.D. 2,270 ft.

Smith's No. 1 Morse, 200 ft. S, 330 ft. W, Sec. 6, Blk. 26, H.&G.N. Sur. ..... Drlg. 2,005 ft.

Smith & McDaniels' No. 1 Chapman, 990 ft. N and E, SW, Sec. 52, Blk. 25, H.&G.N. Sur. ..... S.D. 2,171 ft.

Sullivan et al's No. 1 Morse, 150 ft. W, 330 ft. S, N½ SW, Sec. 16, Blk. A-9, H.&G.N. Sur. ..... Rig.

The Texas Co.'s No. 2 Brown, 170 ft. N, 330 ft. E. NW, Sec. 137, Blk. 3, I.&G.N. Sur. ..... Drlg. 620 ft.

Tedesco Oil Co. et al's No. 1 Morse, 330 ft. N and W, NE SW, Sec. 1, Blk. 26, H.&G.N. Sur. ..... Drlg. 1,800 ft.

Wilson et al's No. 1 Heaston, 330 ft. S and W, Sec. 160, Blk. B-2, H.&G.N.R.R. Sur. ..... 2,500,000 ft. gas 2,825 ft; S.D. 3,259 ft.

HUTCHINSON COUNTY

Great Plains O. & G. Co.'s No. 1 Sanford, C of S 160 ac. of N 320 ac., Sec. 87, Blk. 46, H.&T.C. Sur. ..... Spudding.

Holmes et al's No. 3 Quinn, 330 ft. S and W, Sec. 7, Blk. 9, I.&G.N. Sur. ..... Drlg. 565 ft.

Huber & Co.'s No. 1 Christian, 330 ft. E, 990 ft. N, SW Sec. 33, Blk. Y, A.&B. Sur. ..... Drlg. 2,500 ft.

Phillips Pet. Co.'s No. 1 Johnson-Trammell, 930 ft. N, 330 ft. W, SE cor. W½, Sec. 38, Blk. Y ..... T.D. 3,250 ft; to plug back.

Phillips Pet. Co.'s No. 1 Herring, 330 ft. N and E, W½, Sec. 7, Blk. X02, H.&O.B. Sur. ..... S.D. 600 ft.

Phillips Pet. Co.'s No. 1 Pease, 330 ft. S and E, Sec. 9½, Z. E. Collier Sur. ..... Drlg. 600 ft.

Sinclair O. & G. Co.'s No. 1 Johnson Bros., 330 ft. N and E, NW, Sec. 32, Blk. Y, A.&B. Sur. ..... S.G. 2,230-54 ft; drlg. 2,850 ft; 39,000,000 ft. gas 2,340 ft.

Skelly Oil Co.'s No. 1 Johnson Bros., 660 ft. S and W SE, Sec. 30, Blk. Y, A.&B. Sur. ..... S.O. 3,065 ft. and 3,108-10 ft; S.D. 3,110 ft.

Spurlock et al's No. 1-A Christian, 440 ft. S, 330 ft. W, NE cor. SE SE, Sec. 33, Blk. Y ..... S.D. 3,108 ft; 60,000,000 ft. gas 3,060-75 ft.

Stanavivania Oil Co.'s No. 1 Whittenburg, 330 ft. S and W, Sec. 129, Blk. Z, E.L.&R.R. Sur. ..... Location.

Texas Interstate P. L. Co.'s No. 1 Bost, 971 ft. W, 702 ft. N, Sec. 14, Blk. Y-2, T.T.R.R. Sur. ..... Location.

LIPSCOMB COUNTY

Brown et al's No. 1 Box T Ranch, SW NE, Sec. 612, H.&T.C. Sur. ..... S.G. 3,760 ft; S.D. 4,142 ft.

Okla. Public Service Co.'s No. 1 C. W. Jones, NE SW. Sec. 100, H.&T.C. Sur. ..... S.D. 4,954 ft; shot with 30 qts. to loosen bit.

LUBBOCK COUNTY

Center Oil Co.'s No. 1 Bowles Ranch ..... Small S.O. 1,133-40 ft; S.D. 4,167 ft.

MOORE COUNTY

Delmar Oil Co.'s No. 1 Jones, 990 ft. E, 330 ft. N, NW, Sec. 171, Blk. 3-T, T.&N.O. Sur. ..... Drlg. 2,575 ft.

Gulf Prod. Co.'s No. 1 Kilgore, C SW, Sec. 22, Blk. P.Mc., E.L.R.R. Sur. ..... Gas estimated 15,000,000 ft. 3,059-60 ft; T.D. 3,645 ft; to complete as gasser.

Shamrock O. & G. Co.'s No. 1 Shory, 330 ft. N and W, NE, Sec. 187, Blk. 3-T, T.&N.O Sur. ..... 35,000,000 ft. gas 2,830-3,050 ft; S.D. 3,505 ft; S.O. 3,472 ft; spraying 50 bbls. per day from 3,498-3,503 ft; 6,000,000 ft. gas 3,350-3,505 ft.

Texas Interstate P. L. Co.'s No. 1 Zotness, C NW, Sec. 55, Blk. 6-T, T.&N.O. Sur. ..... Running 8-in. csg. 2,285 ft.

Texas P. L. Co.'s No. 1 Sneed, Jr., C NE, Sec. 46, Blk. 6-T, T.&N.O. Sur. ..... Drlg. 2,060 ft.

MOTLEY COUNTY

Explin. Co.'s No. 6 Matador, 330 ft. N, 330 ft. E, Sec. 132, Blk. M. ..... Drlg. 4,200 ft.

Matador Oil Corp.'s No. 1 Owens, C NE, Sec. 10, Blk. G, B.&B. Sur. ..... S.D. 580 ft.

Texas Interstate P. L. Co.'s No. 1 Masterson, C of S 160 ac., Sec. 85, Blk. 3, G.&M. Sur. ..... Drlg. 500 ft.

POTTER COUNTY

Marshall Spivey's No. 1 Bivins, C SW, Sec. 29, Blk. M-20, G.&M. Sur. ..... C.O. 1,600 ft.

Canadian River Gas Co.'s No. 1 McBride estate "A," 4,950 ft. S, 330 ft. W, E½ S½, Sec. 98, Blk. 46, H.&T.C. Sur. ..... Rig.

RANDALL COUNTY

W. A. Patterson's No. 1 Palo Duro, Sec. 60, Blk. K-14 .. S.D. 1,250 ft.

ROBERTS COUNTY

Big Bend Oil Co.'s No. 1 Ledrick, Sec. 7, Blk. A-5 ..... Shot 10 qts. 5,270-93 ft; S.O. 5,288 ft; S.D. 5,992 ft.

WHEELER COUNTY

Johnson et al's No. 2 Hicks, 890 ft. W, 990 ft. S. Sec. 49, Blk. 17, H.&G.N. Sur. ..... Fishing 1,625 ft.

Lone Star Gas Co.'s No. 1 Close, C SE SW, Sec. 78, Blk. 23, H.&G.N. Sur. ..... Drlg. 1,630 ft.

Lone Star Gas Co.'s No. 1 Ritchey, C NE NE, Sec. 3, Blk. 24, H.&G.N. Sur. ..... Drlg. 1,380 ft.

Long et al's No. 1 Willington, 330 ft. S and W, NW, Sec. 8, Blk. 27, H.&G.N. Sur. ..... Drlg. 1,635 ft.

Magnolia Pet. Co.'s No. 2 Worley, 330 ft. N and W, NE, Sec. 39, Blk. 24, H.&G.N. Sur. ..... Rig.

McGee et al's No. 1 Jolly, C NE, Sec. 15, Blk. A-8, H. &G.N. Sur. ..... Drlg. 1,650 ft.

Murchison & Fain's No. 1 Grogan, C SE NW, Sec. 74, Blk. 23, H.&G.N. Sur. ..... Drlg. 890 ft.

Murchison & Fain's No. 1 Hanes, C NW NW, Sec. 31, Blk. 17, H.&G.N. Sur. ..... Rig.

Murchison & Fain's No. 2 Purcell, C SW NW, Sec. 50, Blk. 17, H.&G.N. Sur. ..... Drlg. 1,880 ft.

Upham Gas Co.'s No. 1 Williams & Laycock, C NW NW, Sec. 5, Blk. 27, H.&G.N. Sur. ..... Drlg. 1,015 ft.

Wischkamper et al's No. 1 Kiser, 330 ft. N and E of SW, Sec. 33, Blk. 17, H.&G.N. Sur. ..... S.D. 1,510 ft.

Woodley et al's No. 1 Sloss & Admire, 660 ft. N, 330 ft. E, Sec. 47, Blk. 13, H.&G.N. Sur. ..... S.D. 500 ft.

WILDCAT OPERATIONS IN OKLAHOMA

(Continued from Page 42)

COMANCHE COUNTY

Croy & Young's No. 1 Cline, NW NE NE Sec. 8-3-10w ..Rig.
Shasta Oil Co.'s No. 1 Romwalt, SW NW Sec. 11-2-10w ..Drlg. 1,050 ft.
G. W. Stogner's No. 1 Doebel, C SW SW Sec. 3-2-9w ....Shut down 1,450 ft.
Green et al's No. 1 Wilson, C NE SW Sec. 14-1-12w ....Shut down 4,055 ft.

GARFIELD COUNTY

Shell Petroleum Corp.'s No. 1 Loomis, C NW NW Sec. 32-23-4w .....Wilcox 6,132 ft.; drlg. 6,222 ft.
E. L. Love et al's No. 1 White, SE cor. NW Sec. 9-24-6w .....Shut down 5,580 ft.

GRADY COUNTY

J. V. Bailey's No. 1 Hubbard, C NE NW Sec. 1-10-6w ....Shut down 100 ft.
J. M. Henry et al's No. 1 Abraham, SE cor. NW Sec. 4-5-8w .....Rig.

GRANT COUNTY

Su-Vi-Bar and Amerada's No. 1 Hurst, C SW Sec. 25-26-5w .....Drlg. 1,230 ft.
Cowden et al's No. 2 Vollmer, CEL NE SW Sec. 22-25-4w..Shut down 5,640 ft.

GARVIN COUNTY

McMinn et al's No. 1 Carson, NE NW Sec. 5-3-4w .....Rig.
Nelson et al's No. 1 Strickland, NE NW Sec. 10-4-3w ...Shut down 2,880 ft.

GREER COUNTY

I. T. I. O. et al's No. 1 fee, C SW NE Sec. 17-6-24w ....Shut down 2,290 ft.

HARMON COUNTY

Harmon-Tex Oil Co.'s No. 1 Hoadley, NE cor. Sec. 17-4-24w .....Drlg. 2,140 ft.
S. M. Stauffer's No. 1 Castleman, SW NE Sec. 8-4-26w..Shut down 625 ft.

HARPER COUNTY

Empire's No. 1 Bruce, C NE SW Sec. 12-25-20w .....Fishing 5,570 ft.
Sinclair Oil & Gas Co.'s No. 1 Howell, C SW SW Sec. 14-26-24w .....7,000,000 ft. gas; completed 5,-330-40 ft.

HASKELL COUNTY

I. T. I. O.'s No. 1 Blake, SW NW Sec. 3-10-21 .....Location.
Mid-Western's No. 1 Poister, C NE SE Sec. 33-10-22 ....Drlg. 3,265 ft.
Holden's No. 1 Phillip, SE cor. Sec. 3-9-18e .....Shut down 1,860 ft.
Marion Oil's No. 1 Sanders, NW NE NW Sec. 10-9-18e ..Shut down 2,387 ft.
Sanboise Gas' No. 1 Unknown, SW NW SE Sec. 32-9-21e..Shut down 2,100 ft.

HUGHES COUNTY

Wright et al's No. 1 Ott, SE SW Sec. 15-5-11 .....Shut down 1,645 ft.
Canady et al's No. 1 Kanard, NW SW Sec. 29-9-12 .....1,000,000 ft. gas 2,284 ft.; drlg. 4,500 ft.
Irwin et al's No. 1 Jones, SE NW Sec. 30-5-10 .....Drlg. 4,215 ft.

KAY COUNTY

Boucher Oil Co.'s No. 1 Jefferson, NE SW Sec. 32-26-1w .....Rig on ground.
Alco Royalty Co.'s No. 1 Wolf, SE SW SE Sec. 34-26-2w..Drlg. 3,540 ft.
Blankenship Petroleum Co.'s No. 1 Hansen, SW NW SW Sec. 17-27-2 .....4,000,000 ft. gas 3,580-93 ft.

KINGFISHER COUNTY

Prairie and Slick's No. 1 Wright, C NW SW Sec. 23-15-5w .....Drlg. 300 ft.
Galt Brown's No. 1 Wolf, NW SE Sec. 6-16-7w .....Shut down 6,015 ft.

KIOWA COUNTY

Merrick Oil Co.'s No. 1 Kelly, NW cor. SE Sec. 20-7-17w..Shut down 1,525 ft.

LEFLORE COUNTY

Red Bank Oil Co.'s No. 1 fee, SE SW NW Sec. 23-9-24..Drlg. 6,070 ft.

LATTIMER COUNTY

Limestone Oil & Gas Co.'s No. 1 Murray, NE cor. Sec. 25-5-18 .....Shut down 1,450 ft.

LINCOLN COUNTY

J. J. Deaner et al's No. 1 Knox, NE NW Sec. 28-17-2 ....Drlg. 4,290 ft.
Atlantic Oil Prod. Co.'s No. 1 Parker, SE NW Sec. 5-14-6 .....Drlg. 3,125 ft.
Magnolia Pet. Co.'s No. 1 Winship, NE SW Sec. 2-13-4...Drlg. 4,420 ft.
Tom Slick Oil Co.'s No. 1 Hammer, SE NW NW Sec. 35-16-2 .....Drlg. 6,102 ft.

LOGAN COUNTY

Slick & Ramsey's No. 1 Jones, SE NW Sec. 24-17-2w ..Drlg. 1,730 ft.
Prairie and Slick's No. 1 Morgan, NW NE Sec. 33-16-1w .....Show oil 5,275-76 ft.
Eason Oil Co.'s No. 1 Young, C SW NE SW Sec. 34-17-4w..Drlg. 2,435 ft.

McINTOSH COUNTY

N. J. Weible's No. 1 Asbell, NE SW SE SE Sec. 35-12-17 .....Drlg. 580 ft.
Patterson et al's No. 1 Smith, SW cor. NW SE Sec. 32-9-16 .....Shot 240 qts. 5,446-5,559 ft.; shot went off up hole; fishing.

MURRAY COUNTY

Chieftain Royalty Corp.'s No. 1 Hendrix, SW SE NW Sec. 27-2-2 .....Fishing 1,920 ft.

MUSKOGEE COUNTY

Becker & Hutchinson's No. 1 May, SE NE Sec. 16-12-19..Rig.
Sioux Oil Co.'s No. 1 Unknown, NW SE Sec. 21-11-19 ....Shut down 1,011 ft.

NOBLE COUNTY

Weaver & Craigin's No. 1 Frederick, C SW NE Sec. 4-24-1w .....Drlg. 2,375 ft.

OKFUSKEE COUNTY

Henry Oil Co.'s No. 1 Harjo, Sec. 36-12-9 .....Drlg. 3,445 ft.
E. L. Robinson's No. 1 Rice, NW Sec. 2-10-9 .....Location.
Shepard et al's No. 1 Neveas, SE NW SW Sec. 3-12-10..Shut down 3,661 ft.

OKLAHOMA COUNTY

Cromwell-Franklin's No. 1 Lincoln Park, SW cor. Sec. 12-12-3w .....Drlg. 3,300 ft.
L. C. Hivick's No. 1 Sunset Addition, NW SW NW Sec. 17-11-3w .....Drlg. 4,390 ft.
Mid-Kansas Oil & Gas Co.'s No. 1 Messer, SW cor. Sec. 32-14-3w .....Drlg. 6,233 ft.
Prairie and Slick's No. 1 Dill, SE NW Sec. 17-13-3w ....Drlg. 6,764 ft.
Warr et al's No. 1 Castle, SW NW Sec. 20-11-3w .....Shut down 6,217 ft.
J. F. Cuniff, trustee's No. 1 Church Land, NE SW SE Sec. 17-12-4w .....Fishing 6,532 ft.
Magnolia and Ramsey's No. 1 Johnson, C NE SW Sec. 35-13-3w .....Drlg. 7,120 ft.
Ryan Consolidated's No. 1 Lawton, NE NW Sec. 3-11-2w..Drlg. 6,857 ft.
Tom Slick Oil Co.'s No. 1 Martin, C NW NW Sec. 13-13-1w .....T. D. 6,971 ft.; water; plugging back 3,250 ft.; to test.

OSAGE COUNTY

Western American Oil Co.'s No. 1, NW SE Sec. 28-23-6 ..Drlg. 2,210 ft.

PAWNEE COUNTY

L. E. Wentz' No. 1 G. Lilly, SE SW NE Sec. 26-22-3 ....Drlg. 1,425 ft.
Flynn & Morgan's No. 1 Jones, SW NE Sec. 22-20-5 ....Drlg. 1,690 ft.
Cochran et al's No. 1 Green, NE cor. SW Sec. 15-23-5 ....Rig.

PITTSBURG COUNTY

Empire O. & R. Co.'s No. 1 Williams, C NE SE Sec. 33-7-16e .....Fishing 3,975 ft.

POTTAWATOMIE COUNTY

The Texas Company's No. 1 Knight, SW SE Sec. 3-8-3...Spudding.

ROGER MILLS COUNTY

Bucy & Stone's No. 1 Williams, C SW Sec. 23-12-24w ..Shut down 2,245 ft.
L. C. Hivick's No. 1 Davis, C NW NE Sec. 4-11-26w ....Shut down 2,905 ft.

SEMINOLE COUNTY

Pure Oil Co.'s No. 1 Shaffer Ashby, SE NE Sec. 22-7-5..Fishing 4,043 ft.
T. Adkins et al's No. 1 McGilbray, SE NE Sec. 4-8-8 ....Drlg. 4,085 ft.
Sunray Oil Co.'s No. 1 Sunday, NW SE Sec. 35-5-5 ....Location.

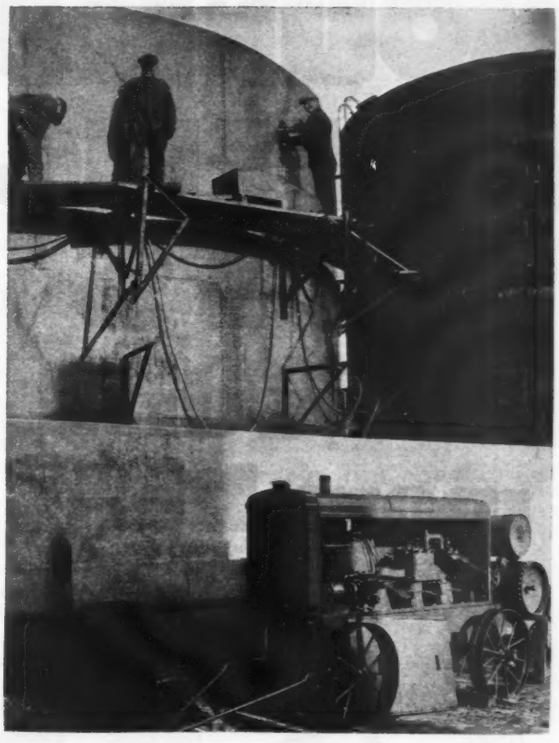
WASHITA COUNTY

Petroleum Holdings, Inc.'s No. 1 Music, NW cor. Sec. 10-9-20w .....Shut down 280 ft.

WOODS COUNTY

Peerless O. & G. Co.'s No. 1 Crowell, C NW NE Sec. 23-28-16w .....Pulling casing 6,211 ft.; may abandon.
Gypsy-Prairie et al's No. 1 Thompson, SE cor. SW Sec. 10-25-15w .....Shut down 6,104 ft.

DEPENDABILITY COUNTS



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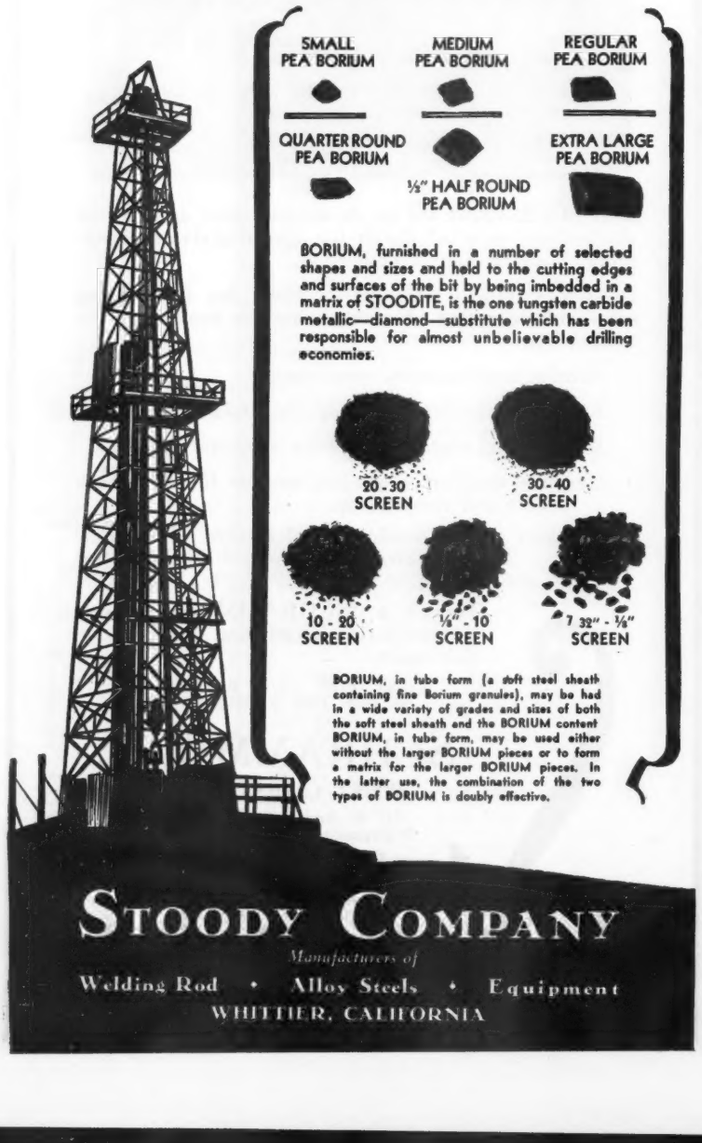
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Sinclair Oil & Gas Co.'s No. 1 Showwalter, C SW SW Sec. 33-27-16w ..... Drlg. 7,134-36 ft.; show oil.

WOODWARD COUNTY

Farrond et al's No. 1 Unknown, SE cor. SW SE Sec. 2-22-17w ..... Shut down 1,387 ft.
Prairie Oil & Gas et al's No. 1 Wilbur, NE cor. NW Sec. 22-23-17w ..... Shut down 7,445 ft.
Burgoyne Brothers' No. 1 Merkins, SW cor. SE NE Sec. 15-21-19w ..... Shut down 1,910 ft.

OKLAHOMA PANHANDLE

CIMARRON COUNTY

Magnolia's No. 1 School Land, C SW NE Sec. 27-5-5.... Drlg. 3,525 ft.

TEXAS COUNTY

Argus Prod. Co.'s No. 1 Fischer, C NW Sec. 29-6-14 .... Location.
Argus Prod. Co.'s No. 1 Parker, C NW NW Sec. 18-6-15 ..... Rig on ground.
Three Way Oil Co.'s No. 1 Crane, SW NW Sec. 11-1-18 ..... Drlg. 4,280 ft.
Palo Alto Oil Co.'s No. 1 Graves, NE SW SW Sec. 23-2-18e ..... Spudded; shut down.

SOUTHERN OKLAHOMA

ATOKA COUNTY

Bryant-Croxton's No. 1 Mason, NW SE NW Sec. 4-1s-14.. Shut down 1,850 ft.
Brookshire's No. 1 Guinn, NW cor. Sec. 18-3s-10 ..... Shut down 100 ft.

BRYAN COUNTY

Bush et al's No. 1 Commerce Trust, NE cor. Sec. 35-6s-9 ..... Shut down 525 ft.
Johnson et al's No. 1 Ussery, SE SW SE Sec. 14-16s-7e.. Drlg. 400 ft.
Marshall's No. 2 fee, C SW SE NW Sec. 26-5s-7 ..... Shut down; 6-in. csg. 265 ft.

CARTER COUNTY

Campen-Lasater Co.'s No. 1 Anderson, NE cor. SE NE SE Sec. 32-4s-2 ..... Shut down 2,590 ft.

CHOCTAW COUNTY

Choctaw Petroleum Co.'s No. 1 Wilson, SW cor. SW Sec. 15-6s-19e ..... Shut down 1,345 ft.

COMANCHE COUNTY

Pelwin Oil Co.'s No. 1 Tafepirdy, C NW NE NE Sec. 5-1s-9w ..... Drlg. 1,826 ft.

COTTON COUNTY

H. J. Dillard's No. 1 McMillan, SE NW Sec. 2-4s-13w .... Location.

LOVE COUNTY

Hobbs et al's No. 1 Roberts, NE cor. SW Sec. 20-6s-2w .. Shut down 3,130 ft.
Gilcrease Oil's No. 1 Burkhart, NE NW Sec. 13-6s-1 .... Rig.

MARSHALL COUNTY

Pace et al's No. 1 Hicks, SW NW Sec. 3-6s-7 ..... Drlg. 390 ft.
Walker et al's No. 1 Parks, NW NE NW Sec. 5-5s-5 .... Drlg. 650 ft.
McCrory et al's No. 1 Adams, NE SW SE Sec. 31-7s-6 .... Rig.
Akers et al's No. 1 Spicer, SW SE SE Sec. 33-5s-7e .... Drlg. 370 ft.

McCURTAIN COUNTY

Milton et al's No. 1 Vase, SW NW Sec. 26-6s-21 ..... Shut down 2,287 ft.

STEPHENS COUNTY

R. Southard's No. 1 McKinney, NE cor. Sec. 25-1-8n .... Shut down 1,060 ft.
Wirt Franklin Petroleum Corp.'s No. 1 McPhail, NW SE Sec. 1-2s-7w ..... Total depth 4,529 ft.; to test.

CENTRAL WEST FIELDS

(Continued from Page 59)

ing a test on his own property, Section 29, same township.

In Clay Township, William Bell and others have a gas well estimated at 1,500,000 feet in a second test on the Robert Hyneman, Section 9, from 1,466-72 feet. Same parties drilling No. 4 Fred Lindy, Section 31, and Roger A. Lee and others drilling No. 4 Charles McAtee in Location 146, same township. Gardner Petroleum Co. is drilling a test on the William Fritz farm, Section 35, Lockhart Township.

Texana Oil Co., drilling a test on the Lawrence Riley farm, Section 10, Barton Township, Gibson County.

Charles W. Scott drilled a dry hole in a second test on the C. L. Davis farm, Section 14, Turman Township, Sullivan County, at 852 feet. Niagara Oil Corp. abandoned No. 8 A. L. Boyer farm, Section 31, Curry Township, same county, also abandoned No. 2 Cordia M. Willis, Section 12, Turman Township. Same company abandoned No. 8 T. B. Morris farm, Section 9, Gill Township, also No. 4 E. E. Dix, Section 36, Fairbanks Township, same county.

The Siosi Oil Corp. abandoned No. 9 on the William Riggs No. 2 farm, Section 32, Prairie Creek Township, Vigo County. Same company drilling a line well on the Thompson-Riggs, same section. Ohio Oil Co. is starting No. 3 W. C. Piety farm, Section 32.

Charles Dice is drilling a test on the John Huffman farm, near Huffman Mills, in Spencer County.

ILLINOIS

Quiet prevails in the fields of Illinois in both the old producing area and the new fields in the western part of the State. In the western section, H. M. Backus and others drilled a test in the SW cor. of the Demint-Hardy property, in Section 28, Harrisville Township, Monroe County, into the St. Peter sand at a depth of 490 feet, there being no oil showing in the Trenton just above the top of the St. Peter. Osborne and others are drilling a test on the Onton Gaertner farm, same county. Chambers and others' test on the Hy Huch farm, Section 4, South Township, same county, failed to get a producer in a sand between 812-45 feet, and is practically a dry hole.

In Randolph County, Township 4s, Section 8, the Petroleum Enterprise Corp.'s test on the John Dufour is dry in the Niagara lime formation from 1,115 to 1,276 feet.

In the Dupo Field, Sugar Loaf Township, St. Clair County, the Ohio Oil Co.'s No. 3 in the SE cor. of the W. Anderlin, NE Section 33, was dry from 708 to 819 feet. Same company is drilling No. 10 Phillip Frye, Section 34, same township. Ritter and others are drilling No. 1 William Scheifler, Section 34, Millstadt Township, same county, and Eckert and others drilling No. 1 Ralph Keim, Section 3, same township.

In Marion County, Miller and others abandoned No. 1 William Draege, NW Section 30, Centralia Township, also No. 1 Schmelzer, same quarter and section, and No. 1 on the Miller-Mackey, SW Section 29. Miller, English and Talbot pulled out No. 1 on the Jones and others farm, SW Section 19.

In Wabash County, Wabash Township, J. D. Toomey's test on the F. Reiber, Section 10, is a dry hole. Max Oil Co. abandoned No. 2 Holson-Dorney, Section 18. J. S. Young, Jr., and others abandoned No. 13 Joe Keyser, Section 13, and are drilling No. 1 B. E. Prichett, Section 3. Ridge Farm Oil Co. is drilling No. 4 J. E. Gillett, Section 14. Robinson Oil Co. is drilling Nos. 2 and 3 Hattie E. Robinson, Section 15. J. D. Toomey and others drilling No. 11 Harrison Buchannan, Section 10.

H. Skidmore and others are drilling No. 2 J. W. McCleve, Section 3, Lawrence Township, Lawrence County. Blosser and others are drilling a test on the Lilly Des Loeuf, Section 12, Dennison Township.

W. C. McBride is drilling a test on the D. E. Frye, Section 3, Montgomery Township, Crawford County. Watson and others are drilling No. 3 Martin Newline, Section 13, Prairie Township.

MISSOURI

A strong effort is being made to develop an oil and gas field in St. Louis County, Missouri. The last completion was by J. W. Baumhoff in a test 1,000 feet from the north line and 2,500 from the west line of the J. W. Baumhoff farm, NE Section 16, Bonhomme Township, which was dry from 952 to 957 feet. Shell Gas Co. is drilling a test on the Joseph Echels in Survey 1,810, St. Charles Township, and Wheeler and others are drilling a test on the B. B. Bradshaw, Survey 1,938, same township.

Huffman Brothers are drilling a test on the Huffman property, Section 1, in St. Louis County.

St. Elco Oil & Development Co. is drilling two tests on the R. J. Cull in Survey 276, and also in St. Ferdinand, as well as drilling No. 1 on the R. J. O. Roller in Survey 1,969, same county.

KENTUCKY-TENNESSEE

(Continued from Page 59)

another of the same kind to the southwest of Penrod. Another dry hole was found between Penrod and Yost post office on the south side of Hazel Creek. This indicates that there is a possibility for both oil and gas somewhere in the vicinity of Rosewood, along Sulphur Spring Creek, where surface conditions look encouraging for both oil and gas, with possibilities of both shallow and deep drilling.

Much Interest in Test

In drilling the well on the Boggess heirs farm, west of Greenville, the county seat of Muhlenberg County, much interest is manifested in the test owing to its closeness to Greenville and also the formations already drilled through at 1,000 feet. Two strata of coal were found around the 400-foot level. One vein was over 4 feet, and the other was full 8 feet in thickness. The 8-foot stratum of coal is entirely a new feature in this section. Small quantities of gas have also been encountered in this well.

The test of Ellis, Young and others on the Joe C. Johnson farm, in the Greenville Field of Muhlenberg County, was drilled through the McCloskey sand which was dry and was plugged back to the Bethel sand and given a shot, and said to show for about a 5-bbl. pumper. Ellis, Young and others after a long and tedious fishing job at their No. 2 on the Bradshere farm, in the Greenville Field, same county, resumed drilling. This is an offset to No. 1 Bradshere, which is one of the best wells found in the Greenville Field of Muhlenberg County up to this time.

No late report has been made of the test being made by the Wah-sha-she Oil Co. on the Casebier land, 3½ miles northeast of Drakesboro, nor of the Ohio Oil Co.'s No. 1 Sunny Tutt farm. No late advice has been had from the same company's test on the Mansfield Fulkerson farm, near Depoy, about 5 miles west of production in the Greenville Pool.

Ohio County Wells

The best of the late completions in Ohio County is the Chester Oil Co.'s No. 5 G. W. Patton 100 acres, just south of the Eastview School and almost directly east of the hamlet of Buford in the Buford Pool, which showed an initial 24-hour production of 300 bbls. from the Stray sand.

The Missouri-Kansas Pipe Line Co.'s No. 20 on the R. A. Duke 200 acres in the eastern part of Ohio County, and formerly owned by the Wood Oil Co., is reported with an initial of 100 bbls. Same company's Nos. 1 and 2 on the V. R. Ferguson 47 acres, are good gas wells, No. 1 rated at 250,000 feet and No. 2 at 1,000,000 feet.

Cumberland Petroleum Co.'s Nos. 10 and 11 W. Hamilton farm, in the Buford Pool, reported at an initial of 30 bbls. each. Same company's No. 3 Moseley farm, same pool, reported a duster.

Chester Oil Co.'s No. 4 G. W. Patton, in the Buford Pool, is reported at 100 bbls. the first 24 hours from the Stray sand. No. 6, same farm, is drilling. Doctor Silverthorn is credited with a dry hole in a test on the Mellie Murray farm, and is drilling a second well on the Will Neal farm. C. M. Root's No. 15 on the V. J. Steele farm, in the Buford Pool, is said to be dry. L. C. Young and others' No. 1 on the Mahoney heirs farm, also in the Buford Pool, is a 30-bbl. initial producer. Oliver Jenkins and others' second test on the Nation farm, south of the Rough River fault, developed a dry hole, while the No. 1 made a commercial producer. Rowe & Thomas drilled a 25-bbl. pumper in No. 2 on the Chester Wimsatt farm. Wood Oil Co.'s No. 1 Cody Woolsey farm, near Dundee, is reported at 30 bbls. initial.

Daviess County Wells

Jetsan Oil Co. found a fair gas producer in a second test on the Barlow farm in the Jones Pool, southeast of Owensboro. Hupp & Duff's second test, 800 feet from the south line and 200 feet from the west line of the Martha Ann Sparks farm, in the Cane Run Pool, pumped 10 bbls. at 736 feet. Ben T. Wright and others' No. 5 well, 300 feet from the south line and 200 feet from the west line of the Goldie Ambrose farm, in the Cane Run Pool, pumped 15 bbls. initial. Eastern Gulf Oil Co.'s No. 6 well, 800 feet from the north line of the Ethel Chapman farm, in the Jones Pool, with 20 bbls. initial production.

Two miles northwest of Bowling Green, in Warren County, George McGinley's No. 1 W. K. Dent farm, has been put on the pump and it showed 1 bbl. at a depth of 850 feet, after standing uncompleted for the past four years.

Dewey Huff and others drilled a dry hole in a test 600 feet from the south line and 400 feet from the west line of the George Fulkerson farm, in Ohio County. Doctor Buckner and others' second test in the northeast corner of the Joe Cheek farm, same county, was also a duster.

Loman, Daley and others made a fine strike in No. 5 well, 700 feet from the north line and 500 feet from the west line of the J. B. McGovern farm, in Hancock County, which showed an initial production of 80 bbls. James C. Ellis and others' No. 4 on the Link Richards farm, same field, said to show around 15 bbls. initial.

In the Niagara Field of Henderson County, the Niagara Oil & Gas Co.'s No. 4 Joe Alavey farm, reported at 10 bbls.

B. A. Allen expects to give a shot to a well which he has drilled on the Brake farm on Bear Creek, in Cumberland County, in the belief that he will have a good producer. He got the sand at 311-325 feet and the hole is now standing two-thirds full of oil. He is moving the rig to a location farther down the creek.

EASTERN FIELDS

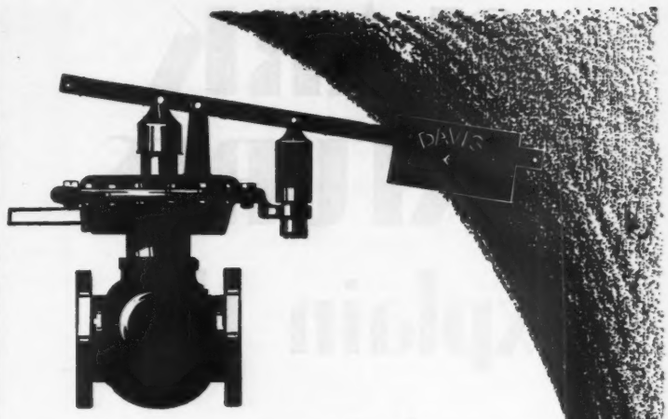
(Continued from Page 62)

feet of gas. In Amwell Township, M. F. Whitehill & Co. drilled a test to the Salt sand at 1,260 feet and it is a gas well making by meter 248,640 feet a day.

In Greene County, the Natural Gas Co. of West Virginia drilled its No. 2 on the Mary Patterson farm to the Fifth sand and has a light gasser. This is in Richill Township. In Wayne Township, the Peoples Natural Gas Co. completed a test on the James E. Moore farm at 3,362 feet and it is a gasser. In the same township the Equitable Gas Co. has a good gas well on the Ernest Yeager farm. In this county, there are several other wells nearing the gas sand. The Chartiers Oil Co. is drilling at 2,250 feet on the Spencer Kennedy farm in Perry Township. The Union Gasoline & Oil Corp. is at 2,560 feet on the test on the Lewis Vance farm in Dunkard Township.

New Tests in West Virginia

In Sheridan district, Calhoun County, West Virginia, the Hope Construction & Refining Co. has completed a rig for its test on the H. S. Knight farm, and in Sherman district, L. P. Bickel has completed a rig for his well on the S. T. Stump farm. In Paw Paw district, Marion County, Victor Tennant has a rig up for his test on the Elza Amos farm and in the same district Harry Tennant is starting his test on the Augusta and W. H. Mercer farm. In Clay district, Wirt County, Norman Agnew completed his rig for a test on the Ward Nutter farm. In Reedy district, Davis & Richman have a rig ready for a test on the John Nugum farm. In Pleasants County, McKim district, C. F. Casper has rigged up for his test on the George Reed farm, and in Union district, the Frank Webb Oil Co. is drilling at 750 feet in its test on the Frank Webb farm.



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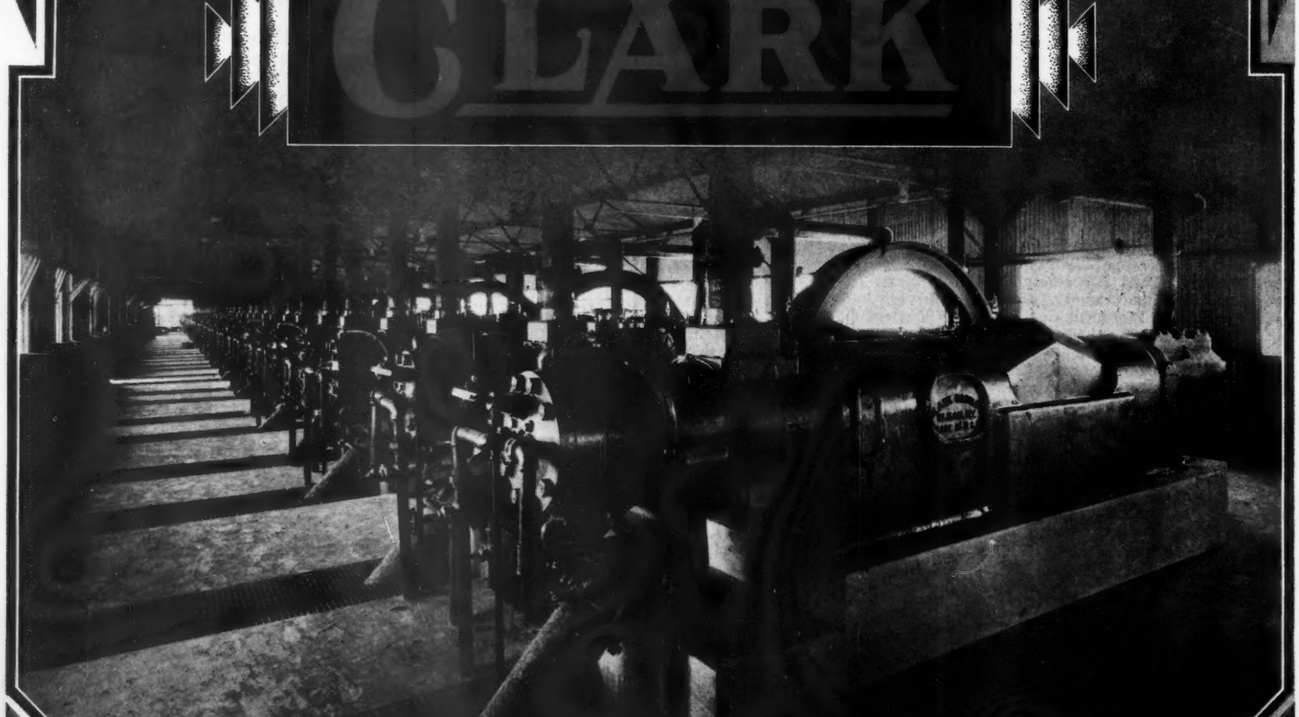

200 H. P. Clark Super 2s in the Phillips Petroleum Corp. North Plant, Pampa, Texas.

WILDCAT OPERATIONS IN SOUTHWEST TEXAS

(Continued from Page 46)

Humble Oil & Ref. Co.-Shell Pet. Corp.'s No. 2 Wm. Singers, 1,320 ft. W of E line, 1,800 ft. S of N line of Sec. 312, Alta Verde area, 7 miles SE from Lasater gas field ..... T. D. 4,500 ft.; heaving shale.

BEXAR COUNTY

Moore-Jauer's No. 1 Holly R. Ellison ..... T. D. 2,150 ft.; fishing.
K. M. S. Petroleum Co.'s No. 1 E. Salicky, 132 ft. from E line, 10 ft. S line of tract, Blk. 15, Mission Gardens ..... Location.
McElreath & Suggett and Wentz Oil Corp.'s No. 1 A. B. Stephens, 2,100 ft. to N line, 960 ft. to E line of tract in the P. W. Hays Sur., 7 miles E of San Antonio ..... T. D. 1,636 ft.; drlg. in Edwards.
Morgan Bros.' No. 1 Barkmeyer, 1,650 ft. to N line, 600 ft. to W line of 600-ac. tract in the P. Villapando Sur., 8 miles SE from San Antonio ..... T. D. 700 ft.; shut down.
J. M. Russell's No. 1 F. L. Price, 1,590 ft. to N line, 660 ft. W line of tract in Angel Navarro Sur. .... T. D. 50 ft.; shut down.
J. M. Russell's No. 1 A. O. Miles, 1,600 ft. N line, 600 ft. W line 450-ac. tract, Angel Navarro Sur., 10 miles S from San Antonio ..... T. D. 700 ft.; shut down.
Swearingen Oil Co.'s No. 6 A. J. Swearingen, 150 ft. W line, 1,100 ft. S line of 100-ac. tract, Sur. No. 52..... Location.
Swearingen Oil Co.'s No. 5 fee, 30 ft. S of No. 4, Sur. 52 ..... Location.
Swearingen Oil Co.'s No. 1 J. Halverdin, 1,997 ft. W line, 150 ft. SW line of 109-ac. tract in the J. Perege No. 52 Sur. ..... T. D. 718 ft.; sand 699-718 ft.; slopping oil over top of casing; setting up storage.
Henry Yelvington et al's No. 1 Beck, 355 ft. from W line, 310 ft. from S line 100-ac. tract, SW cor. of P. W. Hays Sur., 7 miles E from San Antonio ..... T. D. 1,470 ft.; shut down.

CALDWELL COUNTY

J. T. Callahan's No. 1 W. H. Callahan, 630 ft. S line, 2,280 ft. W line 176-ac. tract in the J. R. Miller Sur. ..... Drlg. 2,401 ft. in Buda.
W. E. Allaun's No. 1 Cosey, SW cor. of tract ..... Location.
W. E. Allaun's No. 2 McKean, 300 ft. W of No. 1 ..... Location.
Humble Oil & Ref. Co.'s No. 12 F. Gray, 150 ft. N line, 253 ft. W line of tract in the J. Hinds Sur. ..... Location.

CALHOUN COUNTY

The Texas Company's No. 1 Thomas in the J. D. Tilly Sur. ..... T. D. 2,011 ft.; drlg. in gumbo and sand.

COLORADO COUNTY

Penn Oil Co.'s No. 1 H. C. Wilson, 400 ft. from W line, 450 ft. from E line of 50-ac. tract in the John McCrosky Sur., 5 miles E from Columbus ..... T. D. 4,690 ft.; dry and abandoned.

COMAL COUNTY

Caldwell & Lanier's No. 1 T. J. Byler, 175 varas from W line, 370 varas from N line of 320-ac. tract in the H.E.&W.T. No. 5,894 Sur. ..... Location.
New Braunfels Oil & Gas Co.'s No. 1 Adolph Seidemann, 269 ft. to NE line, 470 ft. to NW line of farm in the A. M. Esneuricas 11-League Sur., 1 mile SE from New Braunfels ..... Spudded in; (112-ft. derrick).

DEWITT COUNTY

H. T. Roe's No. 1 Leinhardt ..... T. D. 2,170 ft.

DUVAL COUNTY

Vacuum Oil Co.'s No. 1 Duval County Ranch Co., 3,143 ft. N line, 1,368 ft. S line Sur. 220 ..... Location.
Sal Oil & Gas Co.'s (Southern Oil Co.) No. 2 Welder-Wood, 1,980 ft. E line, 2,490 ft. N line Sur. 215 ..... T. D. 1,600 ft.; drlg.
T. W. Callahan and W. M. Howard's No. 1 J. M. Luby, 3,960 ft. N line, 3,960 ft. W line Sur. 24 ..... T. D. 3,610 ft.; drlg.
Putnam & Walsh's No. 1 Hagist, 570 ft. N line, 150 ft. E line, Blk. 5, Sur. 269 ..... T. D. 2,200 ft.; sand 2,195 ft.; tested gas, oil and salt water.

EDWARDS COUNTY

Phillips Pet. Corp.'s No. 2 A. G. Holman, 320 ft. from N and E lines of SE of tract, C.C.S.D.&N.G.R.G. Sur. No. 25 ..... T. D. 4,120 ft.; setting 8¼-in. csg.
James Dalglish's No. 3 Peterman, 850 ft. N line, 1,100 ft. W line of Sec. 82, Blk. E, in the H.E&W.T. Sur... Location.
James Dalgish-Morrow's No. 1 Peterson, NW cor., Sec. 82, Blk. E, H.E.&W.T.R.R., NE cor. of county in the H.E.&W.T.R.R. Sur. ..... T. D. 1,350 ft.; drlg.

FRIO COUNTY

A. H. Wray's No. 1 Burns estate, 700 ft. N, 330 ft. E of C Sec. 123, Antone Hulpzor ..... Spudded in.

GOLIAD COUNTY

Union Prod. Co.'s No. 12 George Ray, 2,350 ft. SW of NE line, 330 ft. NW of SE line George A. Ray 400 ac. in the Wm. Southerland Sur. ..... T. D. 4,318 ft.; cored dry sand; continue coring.
A. G. Riemenschneider's No. 1 A. T. Fromme, 275 ft. from N line, 912 ft. W line of 300-ac. tract, P. Dexter Sur. ..... T. D. 2,430 ft.; drlg.
Wm. F. Morgan's No. 1 Peirrie, 7,600 ft. SW of NE line, 2,550 ft. SW of NW line of Fannie Peirrie 2,350-ac. tract, SW part of county in the Vincente Ramon Sur. ..... T. D. 6,004 ft.; dry and abandoned.

GONZALES COUNTY

James Dalgliish's No. 3 Peterson, 850 ft. N line, 1,100 ft. W line Sec. 82, Blk. E, H.E.&W.T. Sur. ..... Location.
R. Antibus' No. 1 Clem Martin ..... T. D. 1,980 ft.; temporarily abandoned.
Mardon Oil Co.'s No. 1 Borrer, 150 ft. N and W in the James Stewart Sur., 5 miles NW from Waelder ..... T. D. 1,850 ft.; shut down.
Mardon Oil Co.'s No. 1 Robinson ..... T. D. 1,005 ft.; set casing.
Linden Pet. Corp.'s No. 1 Hensley, 650 ft. N line, 1,110 ft. W line of J. W. Hensley 100 ac. in the James Smith ..... To spud in by end of week.
United North & South Dev. Co.'s No. 2 Preston, 1,050 ft. NE, 450 ft. NW of upper S or SW cor. of Oethkin one-third league, 900 ft. SE of Preston No. 1.... Location.
Acme Oil & Royalty Corp.'s No. 1 Weber. Thomas Wright Sur. ..... T. D. 2,350 ft.; shut down.
A. J. Keiffer et al's No. 1 B. B. Dix, 550 ft. W of E line, 2,775 ft. N of S line (Guadalupe River) in the Ira Nash Sur., 4 miles SE from Darst Creek ..... T. D. 2,816 ft.; hole cleaned; resumed drlg.; now coring.
Finnell & Elam's No. 1 J. F. Robinson, 2,000 ft. N line, 4,420 ft. E line, in the J. H. Livergood, 2½ miles NE from Waelder ..... T. D. 2,752 ft.; drlg. in shale.

GUADALUPE COUNTY

Adams & Lyles' No. 1 Otto Nitche, 1,000 ft. S of N line of farm, 2,200 varas S of N line (Guadalupe River), 2,700 varas W of E line of Jesus Canter Sur., 5 miles SE from Seguin ..... Drlg. 1,100 ft.
New Braunfels Oil & Gas Co.'s No. 1 A. Seiderman, 279 ft. N line, 470 ft. W line of 142-ac. tract in the A. M. Esnaurizer Sur. ..... Location.
Cranfill & Reynolds' No. 1 McIntire, 150 ft. to E line, 150 ft. to S line of 100-ac. tract in the A. Gibson Sur., 6 miles SE from Seguin ..... Rigging up.
Grayburg Oil Co.'s No. 3 Wells, 5,730 ft. E line, 2,490 ft. S line of NE cor. of Wells tract in the James D. Baume Sur., 6 miles SW from Darst Creek ..... Waiting on drilling rig.
Cranfill & Reynolds' No. 1 Wilson, 150 ft. S line, 1,200 ft. to W line 92-ac. tract in the Jesus Canter Sur., 8 miles SE from Seguin ..... Location corrected.
Brown Hinds et al's No. 1 George Altzger, 1,300 ft. from SE line, 1,100 ft. from SW line, of 120-ac. tract in A. Mansola Sur. ..... T. D. 1,975 ft.; shut down in Del Rio.
Ray Oil Co.'s No. 1 R. Felsing, 300 ft. NW line, 450 ft. NE line, 120-ac. tract in the M. Baker Sur. ..... T. D. 643 ft.; drlg.
Louis Nels et al's No. 1 Voges, 517 ft. to S line, 150 ft. to E line of 150-ac. tract, 150 ft. E line and halfway to N and S line of Joseta Leal Sur. ..... T. D. 592 ft.; dry and abandoned.
B. L. Raborn's No. 1 B. Blumberg, 1,120 ft. NW line, 3,000 ft. NE line of Moses Baker Sur. ..... T. D. 425 ft.; drlg. in shale.

JACKSON COUNTY

The Texas Company's No. 1 Mitchell, 1,750 ft. E, 880 ft. N of SW cor. Ewing Sur. ..... T. D. 5,517 ft., drlg. in sand and shale.

JIM WELLS COUNTY

J. Walsh et al's No. 1 W. D. Wade, 1,035 ft. NE line, 300 ft. NW line of N cor., Lot 1, Blk. C, W. H. Bode Subd. ..... T. D. 210 ft.; set 10-in. surface csg.; waiting on cement.

KARNES COUNTY

Clayton & Pierce's No. 1 Barnett in the Alex Hunter Sur., 6 miles N of Karnes City ..... T. D. 2,916 ft.; will deepen to 3,600 ft.
J. F. Morrissey et al's No. 1 Ragsdale, 660 ft. SW of C of NE line of 170-ac. farm in the McCouil Sur. .... T. D. 1,794 ft.; drlg. (corrected depth).
Dr. Hewitt's No. 1 W. E. Porter, 650 ft. from N line, 700 ft. from W line of 416-ac. tract in the Victor Blanco Sur., 8 miles SE from Runge ..... T. D. 2,706 ft.; drlg. in shale.
Moody-Seagraves' No. 1 W. W. Boyce, 2,110 ft. from E line, 487 ft. from S line in the W. W. Boyce Sur. .... T. D. 5,280 ft.; dry and abandoned.

KENDALL COUNTY

Borgett et al's No. 1 Haag, W. Avery Sur. ..... T. D. 940 ft.; drlg.
A. S. Mowinkle's No. 1 Kaston, 150 ft. from N line, 150 ft. from E line of tract, Sur. No. 724, 9 miles due W of Kendalia ..... T. D. 900 ft.; drlg.
Sitten et al's No. 1 Garvin, C of NE of D. L. Richardson Sur. in the D. L. Richardson Sur., 1 mile NE from Kendalia ..... T. D. 710 ft.; drlg.
Dickinson et al's No. 1 Edmondson, 150 ft. from S line, 350 ft. from W line of tract in the J. O. Blair No. 72 Sur., 1 mile NW from Kendalia ..... T. D. 40 ft.; spudded in and shut down.
Dixon Oil Co.'s No. 1 Ottmer Behr, W of H.T.&B.R.R. Sur., 3½ miles SE from Sisterdale ..... T. D. 1,790 ft.; drlg.
P. B. Sterling's No. 1 R. J. McCrocklin, 1,350 ft. from N line, 250 ft. from W line of the B. G. Owens Sur., 4 miles W from Kendalia ..... T. D. 400 ft.; drlg. in shale.
R. M. Perkins' No. 1 J. Lawhon, Sec. 10, 2,475 ft. E line, 1,488 ft. S line ..... T. D. 460 ft.; drlg.

KERR COUNTY

Evans et al's No. 1 Love Ranch, 100 ft. from S line Sur. 1,597, 1,000 ft. E of W line of J. Martinez No. 1,594 Sur. ..... T. D. 700 ft.; setting 12½-in. csg.

KLEBERG COUNTY

Bowen & Sarles' No. 1 Robert, H. Simmons in the A. Houston Sur. No. 611, Sec. 7, King Subd., 150 ft. out of NW cor. of SW ..... T. D. 1,580 ft.; shut down; W.O.C.

KINNEY COUNTY

Magnolia Petroleum Co.'s No. 1, SE cor. of Bladz Sur., near S.P.R.R., close to Blume test on Wardlow ranch, W part of county, 2½ miles from Blume .... T. D. 3,000 ft.; drlg.
Mardon Oil Co.'s No. 2 Jim Clamp ..... T. D. 2,714 ft. in hard sand; coring.
A. Blume et al's No. 2 Herbst, 1,731 ft. W and S lines of Sur. in the Poindexter-Burns Sur. ..... T. D. 275 ft.; shut down.

KIMBLE COUNTY

Lindley Bros.' No. 1 Anderson, Sec. 178, Mubenger Sur... T. D. 990 ft.; shut down.
Dixie Oil Co.'s No. 1 Bodel, 900 ft. W of N line of Sec. 440, in Sec. 80, in the J. S. Patterson Sur. ..... Location.
C. L. Bryant et al's No. 1 Lambert, 7,700 ft. N and W lines of F. Lotta Sur. ..... T. D. 685 ft.; shut down.

LIVE OAK COUNTY

Catlett & O'Neil's No. 1 Pat Pugh, 620 ft. S line, 150 ft. E line of Pugh tract, Abstract 189, in the E. Games Sur. No. 253, 6 miles N from Dinero ..... Location.
Jacob, Buzzini & Pickett, Inc.'s No. 1 C. E. Kay in the Bridget Fadden Sur., 3 miles E from George West ..... Location.
O. Stalley et al's No. 1 Nichols, 2,000 ft. from W line, 500 ft. from S line in the Ayers Sur. ..... Location.
Dougherty et al's No. 1 Jim Dougherty, 2,254 ft. SE of NW line, 750 ft. NE of SW line of M. Bowen Sur. ..... T. D. 3,860 ft.; dry and abandoned.

LEE COUNTY

A. H. Wheeler and associates' No. 1 fee, 14 miles NE from McDade, Blk. 47, H. Donohoe Sur. ..... Derrick up; to be an Edwards lime test.

McMULLEN COUNTY

E. H. Coquot's No. 1 Fahler, 2,300 ft. to N line, 300 ft. E line of 1,000-ac. tract in G. Pettus Sur. ..... T. D. 2,000 ft., contract depth.
Mogul Pet. Co.'s No. 1 Martin, 150 ft. NW line, 150 ft. to SW line of E. Melon No. 212 Sur. ..... Preparing to set surface csg.

MAVERICK COUNTY

Rycade Oil Corp.'s No. 6 Chittim, 1,445 ft. from S, 320 ft. from W of Sec. 116, Blk. 7, I.&G.N. Sur. ..... T. D. 3,240 ft.; drlg.
Rycade Oil Corp.'s No. 5 Chittim, 600 ft. W of No. 3 Chittim, 500 ft. E line, 225 ft. from S line of SE Sec. 115, Blk. 7, in the I.&G.N. Sur. ..... T. D. 4,205 ft.; drlg.
Rycade Oil Corp.'s No. 5 Sullivan, in C of Sec. 82, Blk. 7, in the I.&G.N. Sur. ..... T. D. 6,535 ft.; drlg. in shale.

MEDINA COUNTY

Pat Armstrong's No. 1 C. W. Butts, in George C. Hanson Sur. ..... T. D. 1,860 ft.; tested sulphur water; drlg. deeper.
B. F. Newhaus et al's No. 1 Fusselman, 200 ft. E and S lines of tract (320-ac.) in the M. Castro Sur. .... Location.
Pearson Oil Co.'s No. 6 Medina Valley Inv. Co., 2,500 ft. S and E line of lease of Isom Palmer Sur. .... T. D. 1,000 ft.; hole full of water: shut down.
Pan American Dev. Co.'s No. 1 Antonio Hart, in Harrison Sur. No. 799, 15 miles S from Hondo ..... T. D. 1,806 ft.; drlg. in lime.
National Oil Co.'s No. 1 Howard, 1,750 ft. E of W line, 1,854 ft. N of S line of survey in the John George Sur. No. 9, 10 miles S of Dunlay ..... T. D. 1,645 ft.; has sand 1,610 ft.
Sun Oil Co.'s No. 1 Edgar, 450 ft. from E line, 150 ft. from S line of 320-ac. tract in the J. Buell No. 362, 3 miles N from Noonan ..... T. D. 1,317 ft.; fresh water; abandoned.
Donaldson Oil & Dev. Co.'s No. 2 Hillenmeyer, James Hillenmeyer No. 25 Sur., 500 ft. to E line of Sur., 150 ft. to S line of N half of Sur. ..... T. D. 200 ft.; shut down.
Pat Armstrong's No. 1 Crawford, 1,389 ft. N line, 2,550 ft. E line of Sur., 478.6 miles W from Devine ..... T. D. 400 ft.; shut down.

NUECES COUNTY

Independent Oil & Gas Co.'s No. 1 Baldwin, 330 ft. each way out of NE of the J. C. Russell Subd., Blk. 11, 3 miles W from Corpus Christi ..... Moving in tools; derrick up.
R. A. Thompson, trustee, et al's No. 1 Lawrence Harrell, 300 ft. N of S line and equal distance from E and W lines of Blk. 19, Sheppard farm lots subd., 4 miles W of Corpus Christi ..... T. D. 1,735 ft.; abandoned.

R. A. Thompson et al's No. 2 Lawrence-Harrell, 300 ft. from N and E lines of Blk. 19 ..... Set 12-in. csg. 400 ft.

SAN PATRICIO COUNTY

Magnolia Pet. Co.'s No. 1 Freeman, 660 ft. S and W lines of NW half of 80-ac. tract Sec. 57, in the E. J. McGloin Sur. ..... T. D. 5,526 ft.; previously reported as completed; now rigged up to drill deeper.

George B. Pickett's No. 1 Baldwin, 9,000 varas due E of Denton, 1,200 ft. S of the SE cor. of O'Neil Sur., Abstract 211 ..... T. D. 3,900 ft.; shut down.

J. L. Kennedy's No. 1 McRae, 1,170 ft. NW of the center of the SE line of 500-ac. tract ..... Location.

Saxet Oil Co.'s No. 1 Carroll, 800 ft. N line, 130 ft. to W line, Lot 32-A, Sec. 32 of the fourth Subd., Taft farms ..... Derrick up.

Union Prod. Co.'s No. 4 Welder, 3,000 ft. N line, 4,500 ft. E line of tract in the E. Portillo Sur. ..... Location.

G. B. Peterman et al's No. 1 Crow, 150 ft. from S line, 170 ft. from W line of Sec. 24 of the Fulton-Coleman Pasture Lands, J. H. Paul Subd. ..... Location (must be spudded in by August 1).

G. B. Peterman et al's No. 1 Foster, 150 ft. from E line, 1,420 ft. from N line of Blk. 5 of the Welder-Coleman-Fulton Subd., 3½ miles W from Sinton .... Location.

Cosden Oil Co.'s No. 1 Schmolsteig, C of SE Sec. 9, H. Powell Subd. in the B. Blanchard Sur. ..... Set 10-in. csg. 1,200 ft.

LaFeria Oil & Gas Co.'s No. 1 C. C. Smith, in J. C. White Sur., 690 ft. to N line, 350 ft. to E line ..... T. D. 3,752 ft.; washing down to get on bottom.

STARR COUNTY

I. V. Maclean's No. 1, Tract No. 5, 1,063-ac., Porcion 81, Juan Jose de la Garza in the Falcon grant ..... T. D. 150 ft.; drlg.

Kush Expltn. Co.'s No. 1 Kelsey-Bass ..... T. D. 380 ft.; drlg.

J. L. Smith's No. 1 Welch, Perdernal Sur. ..... T. D. 900 ft.; drlg.

UVALDE COUNTY

E. Anglin et al's No. 1 U.P.P., 1,500 ft. from NW line, 7,460 ft. to NE line of Manual Leal Sur., 10 miles SE from Uvalde ..... Spudded in.

Mission Drlg. Co.'s No. 1 Uvalde Pecan plantation in the L. Taylor Sur., 11 miles S from Uvalde ..... T. D. 800 ft.; drlg.

Waldrop & Welch's No. 1 H. S. Benson, 2 miles NW of Uvalde ..... T. D. 1,620 ft.; dry and abandoned.

Waldrop & Welch's No. 1 E. R. Edmonds, 1,750 ft. NW, 7,200 ft. W of Sec. 71, in the A. Gomez Sur., 8 miles S of Uvalde ..... T. D. 1,193 ft.; moving in heavier rig.

Phantom Oil Co.'s No. 1 Claudt, Sec. 611 ..... T. D. 2,250 ft.; setting 8¼-in. csg.

VICTORIA COUNTY

Attlee Drlg. Co.'s No. 1 M. West, 5,100 ft. to NE line, 1,050 ft. to NW line of 1,800-ac. tract in the P. DeWitt Sur. ..... T. D. 1,580 ft.; shut down (corrected depth).

Houston Oil Co.'s No. 1 McFaddin, 330 ft. S, 900 ft. E of SE cor. of Sur., 1¼ miles SW of Lion Oil Co.'s gasser and 1¾ miles E of The Texas Company's No. 1 McFaddin in the L. Mann Sur. ..... Location.

Lion Oil Ref. Corp.'s No. 2 McFadden, 1,917 ft. W of NE cor., 512 ft. at right angles from N line of the C. O. Edwards Sur., 660 ft. E of No. 1 in the M. J. Travesia Sur. ..... T. D. 2,219 ft.; drlg.

The Texas Co.'s No. 1 A. M. McFadden, 1,550 ft. N and E lines of H. Bonny Sur. ..... T. D. 1,800 ft.; drlg.

WEBB COUNTY

J. L. Elliot's No. 1 Esperonza Land & Stock Co., 950 ft. from N line, 2,231 ft. E line Sur. 815 ..... T. D. 1,000 ft.; drlg.

WILLACY COUNTY

Weimer-Richardson's No. 1 Elmore ..... T. D. 1,360 ft.; dropped from report until work is resumed.

WILSON COUNTY

Transcontinental Oil Co.'s No. 1 J. H. Bain, 150 ft. out of E cor. of tract, 1,850 varas from SW line and 75 varas from SE line of Noel F. Roberts Sur. ..... T. D. 4,610 ft.; dry and abandoned.

WILLIAMSON COUNTY

Harlem et al's No. 1 H. H. Stiles, in the J. Bevil Sur., 220 ft. N and 330 ft. E of Sur. ..... Rigging up.

Fred Beatty's No. 1 H. Bland, 450 ft. from N line, 1,000 ft. from E line of tract, in the P. Coursey Sur., 1 mile E from Taylor ..... T. D. 1,176 ft.; shut down

Fred Beatty's No. 1 J. B. Pumphrey, 1,328 ft. from S and E lines of Mrs. J. B. Pumphrey 158-ac. tract in the W. Cartwright Sur. ..... Rigging up.

M. Bartlett et al's No. 1 R. E. Thomas, 450 ft. from N line, 170 ft. from E line of S 50 of 100-ac. of farm in the H. Owen Sur. ..... Spudded in.

E. L. Chapman's No. 2 J. H. McConnell, 1,070 ft. from W line, 150 ft. from N line of tract in the S. Miller Sur. ..... Rigging up.

Elliot et al's No. 1 S. W. Jones, 600 ft. from W line, 400 ft. from S line of Alvert Nantz Sur. ..... Spudded in.

E. L. Chapman's No. 2 Fuchs, 150 ft. SW line, 750 ft. NW line of 93-ac. tract in the S. Miller Sur. ..... T. D. 1,000 ft.; drlg

G. B. Peterman's No. 2 J. C. Abbott, 450 ft. from S and W line of Abbott 100-ac. tract, in the Simon Miller Sur., SE from Thrall ..... Rigging up.

Bridwell et al's No. 1 H. L. Martin, 1,150 ft. from N line, 150 ft. from W line of Simon Miller Sur. ..... Rigging up.

McNeil et al's No. 1 R. L. Abbott, 300 ft. NW line, 150 ft. NE line of Abbott 15-ac. tract, in the S. Miller Sur. ..... Spudded in.

Powell & Kykendall's No. 1 Christian Mager, in the W. Byerly Sur., 150 ft. N and 450 ft. E of farms of 150 acres ..... Old well deepening.

E. L. Chapman's No. 1 Barney Lawrence, 330 ft. from SE and SW lines of farm, in the Simon Miller Sur. .. Rigging up.

E. L. Chapman's No. 1 J. F. McConnell, 150 ft. from S and W of 100-ac. farm in the Simon Miller Sur. .. T. D. 1,922 ft.; Serpentine; show of oil 1,900 ft.

E. R. Ertell's No. 1 J. F. McConnell, 295 ft. from N line, 130 ft. from W of S 50-ac. of 100-ac. farm, in the Simon Miller Sur. ..... T. D. 2,136 ft.; small oil show 1,100 ft.

Keeshan et al's No. 1 R. L. Abbott, 170 ft. from N line, 772 ft. from W line of farm, in the Simon Miller Sur. ..... Derrick up.

E. W. Marts et al's No. 1 R. L. Abbott ..... Spudded in.

Taylor Temple Oil Co.'s No. 1 F. M. Cain, 876 ft. from E line, 150 ft. from N line of C. D. Johnson 109-ac. tract in the S. Miller Sur. ..... Rigging up rotary.

J. A. Thompson's No. 1 T. H. Martin, 150 ft. N and E lines of 20-ac. tract in the S. Miller Sur. ..... Location.

Westheimer & Daube's No. 1 R. L. Abbott, 150 ft. from N and W lines of 57-ac. tract in the S. Miller Sur. .. Location.

R. R. Wilder's No. 1 H. T. Martin, 158 ft. from N and E lines of H. T. Martin 76.25-ac. tract in the S. Miller Sur. ..... Rigging up rotary.

L. W. Wilson et al's No. 1 W. L. Lawrence, 150 ft. from W line and C N and S of 35-ac. tract or 1,400 ft. from SW line, 1,450 ft. SW line of H. Owens Sur. .... Spudded in.

ZAPATA COUNTY

B. F. Nixon's No. 1 A. Gutierrez, 170 ft. S line, 332 ft. E line, Lot 5, Blk. 8, Partition 10, Borrego grant ... T. D. 50 ft.; standing.

Penny Prod. Co.'s No. 1 Trevino, 300 ft. SE line, 200 ft. NE line Marts & Beavers Subd. of Porcion 2 and 3, Blk. 6, Sur. 4 ..... T. D. 780 ft.; standing.

Penny Prod. Co.'s No. 1 Juan V. Cuellar, Jr., et al, 175 ft. NE line, 175 ft. SE line Poppas Subd., Porcion 33 and 34, Blk. 1, Sur. 2 ..... T. D. 150 ft.; drlg (corrected depth).

National Oil Co.'s No. 1 D. B. Adams ..... T. D. 1,180 ft.; sand 1,172-80 ft., standing (corrected depth).

ZAVALA COUNTY

Krebs & Davis' No. 1 Weathersby, E center of NW of Sec. 44, Blk. A, Adams, Beaty & Mouton Sur., 4 mi. E from Loma Vista ..... T. D. 1,782 ft.; drlg.

Ed Anglin's No. 5 Pryor ..... T. D. 1,050 ft.; drlg.

Texas Gas Utilities Co.'s No. 7 West ..... T. D. 1,000 ft.; dry and abandoned.

Texas Gas Utilities Co.'s No. 1 Ike T. Pryor, Jr. ..... T. D. 800 ft.; drlg.

Texas Gas Utilities Co.'s No. 6 A. M. West, C of Sur. in the M. Suniga Sur. No. 44 ..... 20,000,000 ft. gas 814 ft.

Weigand Bros.' No. 1 W. L. Gates, Hooper & Ware Sur. No. 13, 1,320 ft. S of N line, 1,220 ft. W of NE cor. Sur., about 16 miles S of Batesville ..... T. D. 2,300 ft.; ready to resume drlg.

Texas Fuel & Gas Co.'s No. 5 West, 150 ft. from SE line, 4,700 ft. from SW of Marguett Singer Sur., 20 miles SW from Batesville ..... T. D. 850 ft. (corrected depth); completed as gas well; went to salt water; abandoned.

GULF COAST FIELDS AND WILDCATS

(Continued from Page 74)

Humble & Valley's No. 2-B Hardy ..... Drlg. sand 2,800 ft.
Humble & Valley's No. 7 Payne ..... Derrick.
Humble & Valley's No. 8 Payne ..... Derrick.
Humble & Valley's No. 2 Sherrod ..... Drlg.; waiting cement 3,157 ft.
Humble & Valley's No. 6 Woodley ..... Derrick.
Humble & Valley's No. 7 Woodley ..... Derrick.
Humble & Valley's No. 8 Woodley ..... Derrick.
Humble & Valley's No. 9 Woodley ..... Derrick.

DE WALT—FORT BEND COUNTY

Humble Oil & Ref. Co.'s No. 6 Camp ..... Drlg. sand and boulders 1,053 ft.

HUMBLE—HARRIS COUNTY

John Deering's No. 1 Graf ..... No report.
LaRue, trustee's No. 1 Crane, northwest ..... No report.
Rio Bravo Oil Co.'s No. 3 fee, west ..... Drlg. hard sand 4,088 ft.
Rio Bravo Oil Co.'s No. 4 fee, southwest ..... Drlg. rock 3,339 ft.
Rio Bravo Oil Co.'s No. 5 fee, west ..... Derrick.
Rio Bravo Oil Co.'s No. 1 H.&W.T., west ..... Drlg. gumbo 3,698 ft.
South Drlg. & Prod. Co.'s No. 1 Lipper, northwest ..... Comp., flowing 22 bbls. per hr., 3,840 ft.
South Texas Pet. Co.'s No. 15 Morris, south ..... Cemented 6⅝-inch casing 4,988 ft.
Sun Oil Co.'s No. 9 Bender, west ..... No report.
Sun Oil Co.'s No. 10 Bender, west ..... Oil sand 4,349 ft.
Sun Oil Co.'s No. 11 Bender, west ..... Drilling.
Sun Oil Co.'s No. 12 Bender, west ..... Drlg. gumbo and lime 1,800 ft.
Sun Oil Co.'s No. 48 River, north ..... Comp., flowing 375 bbls. pipe line oil 4,802 ft.
Sun Oil Co.'s No. 49 River, north ..... Rig.
Trapshooter Riley's No. 1 Long John Jones ..... No report.
The Texas Company's No. 1 fee ..... Drlg. gumbo and boulders 3,301 ft.
The Texas Company's No. 23 Wheeler and Pickens, northeast ..... Drlg. sticky shale 4,933 ft.
West Production Co.'s No. 3 Foster, north ..... Snudded.

BLUE RIDGE—FORT BEND COUNTY

Gulf Production Co.'s No. 18 Luscher, south ..... Drlg. gumbo and lime 2,888 ft.

PIERCE JUNCTION—HARRIS COUNTY

Gulf Production Co.'s No. 1 Manchester Corp. ..... Rig.
Navarro Oil Co. and Texas Exploration Co.'s No. 19 Dooley, east ..... Comp. flowing 700 bbls. oil 4,850 ft.
Rio Bravo Oil Co.'s No. 12-A Settegast (workover) ..... Comp. flowing 1,250 bbls. 5,404 ft.
Rio Bravo Oil Co.'s No. 14-A Settegast ..... Rigging up to work over.
Rio Bravo Oil Co.'s No. 19-A Settegast ..... Sand 4,325 ft.; cemented 6⅝-inch casing 4,126 ft.

LIBERTY—LIBERTY COUNTY

Empire Gas & Fuel Co.'s No. 13 O'Brien ..... No report.
The Texas Company's No. 7 Green, northwest ..... Drlg. sticky shale 4,051 ft.

BIG CREEK—FORT BEND COUNTY

Gulf Prod. Co.'s No. 59 Davis ..... Drlg. gumbo and lime 2,880 ft.

LOST LAKE—CHAMBERS COUNTY

Pure Oil Co.'s No. 11 Mayes ..... Comp., pumping 75 bbls. net oil, 60 per cent salt water 2,830 ft.
Pure Oil Co.'s No. 11-A Mayes ..... Location.
Pure Oil Co.'s No. 5 Lost Lake ..... Drlg. gumbo 2,058 ft.

NASH—BRAZORIA COUNTY

Rycade Oil Corp.'s No. 27 Wisdom ..... Total depth 3,901 ft.; shale and lime; fishing.

SOUR LAKE—HARDIN COUNTY

The Texas Company's No. 306 Texas Co. fee ..... Total depth 2,143 ft.; set 30-foot screen.

SARATOGA—HARDIN COUNTY

Rio Bravo Oil Co.'s No. 88-A Cotton ..... Washing 550 ft.

GOOSE CREEK—HARRIS COUNTY

Humble Oil & Ref. Co.'s No. 78 Simms-Smith ..... Drlg. lime, shale, shell, boulders 3,620 ft.

SPINDLETOP—JEFFERSON COUNTY

Yount Lee Oil Co.'s No. 5 Fee (workover) ..... Comp., flowing 920 bbls. fluid, 6% per cent water, 4,294 ft.
Yount Lee Oil Co.'s No. 19 McFaddin (workover) ..... Pulling screen.
Yount Lee Oil Co.'s No. 123 McFaddin ..... Drlg. 4,612 ft.
Yount Lee Oil Co.'s No. 137 McFaddin ..... Comp., gas well 5,430 ft.; shut in.
Yount Lee Oil Co.'s No. 138 McFaddin ..... Drlg. shale 5,476 ft.
Yount Lee Oil Co.'s No. 139 McFaddin ..... Drlg. shale and lime 4,066 ft.
Yount Lee Oil Co.'s No. 140 McFaddin ..... Drlg. 3,400 ft.

NORTH DAYTON—LIBERTY COUNTY

Victor Oil Co.'s (V. H. Borsodi) No. 2 Gulf ..... Total depth 4,768 ft.; sidetracking 1,700 ft.
Houtex Oil Co.'s No. 1 Davis, north ..... Drlg. rock 1,396 ft.
Houtex Oil Co.'s No. 2 Wilhite ..... Cap rock 5,167-5,228 ft.; to sidetrack.
Harrison Oil Co.'s No. 5 Quintette ..... Location.
Harrison Oil Co.'s No. 1 Hartell ..... Derrick.

HIGH ISLAND—GALVESTON COUNTY

Gulf Production Co.'s No. 10 Smith ..... Drlg. hard sand 4,366 ft.
Marrs McLean's No. 18 Cade ..... Fishing 4,175 ft.
Marrs McLean's No. 19 Cade ..... Derrick.

ORCHARD—FORT BEND COUNTY

Gulf Production Co.'s No. 23 Moore ..... Drlg. sand and shale 3,991 ft.
Gulf Production Co.'s No. 24 Moore ..... Drlg. shale 3,673 ft.

HULL—LIBERTY COUNTY

J. F. Bashara's No. 1 White (workover) ..... Comp., flowing 250 bbls. oil 3,9[illegible] ft.
Houston Oil Co.'s No. 15 Barngrover (workover) ..... Comp., flowing 150 bbls. oil 3,8[illegible] ft.
Republic Production Co.'s No. 134 Dolbear (workover) ... Comp., flowing 125 bbls. oil 2,8[illegible] ft.
The Texas Company's No. 2 Barrow ..... Total depth 3,993 ft.; sidetracking 3,569 ft.

ESPERSON—LIBERTY COUNTY

Cranfill-Reynolds Oil Co.'s No. 14 Esperson ..... Drlg. shale 3,092 ft.
Cranfill-Reynolds Oil Co.'s No. 15 Esperson ..... Drlg. shale and lime 3,159 ft.
Cranfill-Reynolds Oil Co.'s No. 16 Esperson ..... Derrick.
Cranfill-Reynolds Oil Co.'s No. 3 Moores Bluff ..... Set 80-ft. screen 2,336 ft.; flowing.
Cranfill-Reynolds Oil Co.'s No. 1-B Moores Bluff ..... Drlg. shale 4,236 ft.
Yount Lee Oil Co.'s No. 3 Moores Bluff ..... Total depth 7,269 ft.; cemented 7 inch casing 7,264 ft.

HANKAMER—LIBERTY COUNTY

Gulf Production Co.'s No. 8 Boyt ..... Comp., flowing 1,000 bbls. oil 4,262 ft.; casing 4,210 ft.
Gulf Production Co.'s No. 9 Boyt ..... Rig.
Gulf Production Co.'s No. 1 Ezzell ..... Drlg. hard sand 2,890 ft.

WEST COLUMBIA—BRAZORIA COUNTY

Anderson et al's No. 1 Smith & Brooks ..... Coring 3,260 ft.

ORANGE—ORANGE COUNTY

Sun Oil Co.'s No. 7 Gunstream ..... No report.

BOLING—WHARTON COUNTY

C. S. Thomas' No. 1 Volney ..... hut down 235 ft.
C. S. Thomas' No. 1 Taylor ..... Drlg. gumbo 1,165 ft.

REFUGIO—REFUGIO COUNTY

Houston Oil Co.'s No. 3 Ryals ..... Set 20-ft. screen 3,657 ft.
Houston Oil Co.'s No. 1 Rooke ..... Cemented 13⅜-inch casing 500 ft.
Houston Oil Co.'s No. 1 Strauch, Block 20 ..... Blowing wild; sand 5,468 ft.
Houston Oil Co.'s No. 1 City, Block 59 ..... Drlg. gumbo 4,190 ft.
Houston Oil Co.'s No. 1 O'Connor ..... Drlg. sticky shale 1,717 ft.
Houston Oil Co.'s No. 1 West ..... Coring shale 5,516 ft.
Houston Oil Co.'s No. 1 Rose Lambert ..... Total depth 5,905 ft.; cemented bottom of hole.
Houston Oil Co.'s No. 2 Rose Lambert ..... Drlg. hard sand 5,474 ft.
Houston Oil Co.'s No. 7 Fannie Heard (workover) ..... Total depth 3,718 ft.; plugged to 3,680 ft.
Houston Oil Co.'s No. 1 Johnson, Block 63 ..... Drlg. rock 3,896 ft.
Independent Oil & Gas Co.'s No. 1 Rose Lambert ..... Spudded.
Independent Oil & Gas Co.'s No. 1 Shelly (workover) ..... Comp., flowing 150 bbls. oil 6,446 ft.; pressure 2,200 lbs.
Independent Oil & Gas Co.'s No. 6 Jerry Reilly (workover) ..... Coring sandy shale 6,398 ft.
Edwin M. Jones' No. 3-A J. F. B. Heard ..... Twisted off 3,635 ft.; to sidetrack.
Luling Oil & Gas Co.'s No. 1 J. W. Kay ..... Total depth 3,758 ft.; plugging back.
Luling Oil & Gas Co.'s No. 1 West ..... Rig up to deepen.
Mission Drilling Co.'s No. 1 Moss-Heard, Blk. 11 ..... Cemented surface casing 571 ft.
Mission Drilling Co.'s No. 1 O'Brien (workover) ..... Preparing to deepen.
Mission Drilling Co.'s No. 1 Joe Shay, Block 6 ..... Oil sand 5,462-69 ft.; testing.
Moody-Seagraves Prod. Co.'s No. 1-A O'Brien ..... Derrick.
Moody-Seagraves Prod. Co.'s No. 3 O'Brien ..... Derrick.
Moody-Seagraves Prod. Co.'s No. 9 O'Brien ..... Oil sand 3,685-3,701 ft.; set screen.
Moody-Seagraves Prod. Co.'s No. 1 Strauch, Block 64 ..... Oil sand 5,629 ft.; cemented 8¼-inch casing 5,618 ft.
Moody-Seagraves Prod. Co.'s No. 1-A St. John ..... Cem. 12½-in. casing 1,455 ft.
Morgan Oil Corp.'s No. 2 O'Connor ..... Shut down 5,844 ft.
Pearson Properties, Inc.'s No. 1 Hornburg ..... Rig.
Pearson Properties, Inc.'s No. 3 Ryals ..... Cemented 12½-inch casing 514 ft.
Pearson Properties, Inc's No. 1 Tobe Wood ..... Drlg. hard lime 5,267 ft.
Ed Price's No. 1 Mission River ..... Set 24 ft. screen; to pump.
Saxet Oil Co.'s No. 12 Clint Heard ..... Cemented casing 5,492 ft.
Saxet Oil Co.'s No. 1 Kay ..... Tested salt water 3,696 ft.; pulling screen.
Saxet Oil Co.'s No. 3 Ryals ..... Drlg. sand and shale 2,365 ft.
L. L. Smith's No. 1 Sumner ..... Gas sand 5,456-64 ft.; cem. 9⅝-inch casing.
The Texas Company's No. 2 Ben Shelton ..... Set 6⅝-inch casing 5,457 ft.
Union Producing Co.'s No. 5 O'Brien ..... Set screen 5,432 ft.
Union Producing Co.'s No. 6 O'Brien ..... Derrick.
Union Producing Co.'s No. 5 Powers ..... Location.
Union Producing Co.'s No. 5 Mitchell ..... Rig.
Union Producing Co.'s No. 2 Eskridge-Heard ..... Drlg. sticky shale 3,379 ft.

SOUTH LOUISIANA FIELDS

LOCKPORT—CALCASIEU PARISH

Union Sulphur Co.'s No. 2 Moss ..... Oil sand 5,037-55 ft.; cemented 9⅝-inch casing.
Union Sulphur Co.'s No. 1 Martha Moss ..... Drlg. gumbo 3,900 ft.
Vacuum Oil Co. and Gulf Ref. Co.'s No. 28 Miller ..... Drlg. sandy shale 3,777 ft.
Vacuum Oil Co. and Gulf Ref. Co.'s No. 29 Miller ..... Rig.
Vacuum Oil Co. and Gulf Ref. Co.'s No. 5 Freiberg & Wolf ..... Drlg. hard sand 5,454 ft.
Vacuum Oil Co. and Gulf Prod. Co.'s No. 7 Farquahar ..... Comp., flowing 100 bbls. pipe line oil 500,000 ft. gas on ⅝-inch choke; 600 lbs. pressure 4,818 ft.
Vacuum Oil Co.'s No. 6 Bayou State ..... Rig.
Yount Lee Oil Co.'s No. 1 Miller ..... Drlg. shale 5,102 ft.

HACKBERRY—CAMERON PARISH

F. A. Book's No. 1 Hanzen ..... No report.
Calcasieu Oil Co.'s No. 19 Watkins ..... No report.
Calcasieu Oil Co.'s No. 3 Isaac Dorisu ..... No report.
Duhon Oil & Mineral Co.'s No. 1 Koonce ..... No report.
Federal Petroleum Co.'s No. 1 Hebert ..... No report.
Moon Oil Co.'s No. 5 Sonner ..... Cem. casing to test oil sand.
The Texas Company's No. 7 State ..... Drlg. sand and shale 1,620 ft.
Yount Lee Oil Co.'s No. 31 State ..... Spudded.

JENNINGS—ACADIA PARISH

Ratcliff Oil Co.'s No. 2 Martin ..... Comp., flowing 70 bbls. fluid, 50 per cent water, 1,700 ft.
The Texas Company's No. 5 Rayne heirs, King tract ..... Drlg. rock 8,605 ft.
Yount Lee Oil Co.'s No. 9 Housierre Latrielle ..... Drlg. 5,000 ft.
Yount Lee Oil Co.'s No. 7 Crowley ..... Location.

VINTON—CALCASIEU PARISH

Emerson-Moore's No. 1 Gray estate ..... Location.
Gulf Refining Co.'s No. 4 Gardner ..... Spudded.
Supreme Oil Co.'s No. 2 Gray ..... Rig.
Vinton Petroleum Co.'s No. 9 Gray ..... Rig.
Wilson-Broach's No. 4 Wilson ..... Rig.
Vinton Petroleum Co.'s No. 8 Gray ..... Oil sand 3,440 ft.

BAYOU BOUILLON—ST. MARTIN PARISH

Rycade Oil Corp.'s No. 1 Woodyard Lake ..... Drlg. sandy lime and shale 5,046 ft.
Rycade Oil Corp.'s No. 10 Bullion fee ..... Comp. flowing 800 bbls. 4,307 ft.

STARKS—CALCASIEU PARISH

Adams Oil Co.'s No. 1 Roderick ..... No report.
J. O. Davis' No. 1 Industrial ..... Standing 3,775 ft.
Gulf Refining Co.'s No. 24 Starks ..... Drlg. water sand 570 ft.

SWEET LAKE—CAMERON PARISH

Magnolia Petroleum Co.'s No. 1 Sweet Lake ..... Drlg. 5,000 ft.
Pure Oil Co.'s No. 9 Yount Bee ..... Total depth 6,813 ft.; cemented casing.

ANSE LA BUTTE—ST. MARTIN PARISH

Yount Lee Oil Co.'s No. 2 Herbert ..... No report.

FORT BARRE—ST. LANDRY PARISH

Gulf Refining Co.'s No. 2 Lahaya ..... Abandoned 4,100 ft.
Pure Oil Co.'s No. 1 Perkins ..... Drlg. sticky shale 3,484 ft.

MISCELLANEOUS WILDCATS

TEXAS

AUSTIN COUNTY

O'Hara et al's No. 1 Batla, near Raccoon City ..... Shut down 4,000 ft.

BRAZORIA COUNTY

The Texas Company's No. 1 Ewin, Harvey Little Sur. ..... Drlg. sand and shale 6,182 ft.
Mills Bennett Production Co.'s No. 1 Random, Allen ..... Total depth 5,363 ft.; cemented hole 5,197 ft.
Mills Bennett Production Co.'s No. 1 Reese, Allen ..... Drlg. sandy shale 2,571 ft.
Mills Bennett Prod. Co.'s No. 1 Poole, Allen ..... Drlg sand rock 1,252 ft.
Mills Bennett Production Co.'s No. 2 Allen ..... Derrick.
Cullen & West's No. 1 Ward, Damon Mound ..... Abandoned 4,495 ft.
Faust et al's No. 5 Faust ..... Drlg. shale 4,617 ft.
Freeport Sulphur Co.'s No. 2,001 Fee, Bryan Heights ..... Drlg. sand rock 2,046 ft.
Rucks & Patterson's No. 1 Hunter, southwest of Hoskins ..... Total depth 1,180 ft.; sidetracked to rock 968 ft.; shut down.
Rycade Oil Corp.'s No. 1 Rapid City, Henry Austin Sur. ..... Drlg. shale 5,962 ft.
Rycade Oil Corp.'s No. 1 Seaburn, Stratton Ridge ..... Cemented 13⅜-inch casing 1,232 ft.
Rycade Oil Corp. and Vacuum Oil Co.'s No. 1 Wisdom, Lake Jackson ..... Rig.
Shell Petroleum Corp.'s No. 4 Blakely-Danbury ..... Spudded.
Steel & Strickland's No. 1 Lockridge ..... Spudded and shut down.
United Oil Syndicate's No. 1 Moores, Francis Moore Sur. ..... Shut down 1,462 ft.

CALHOUN COUNTY

The Texas Company's No. 1 Thomas, J. P. Tilley Sur. ..... Drlg. sticky shale 3,542 ft.

CHAMBERS COUNTY

Chicago Oil Corp.'s No. 1 Lawrence ..... Total depth 3,948 ft.; cemented casing.
Shell Petroleum Corp.'s No. 1 Herff, Moss Bluff ..... Total depth 5,630 ft.; pulled derrick in; rebuilding.
Pure Oil Co.'s No. 1 J.H.K. Ranch, Oyster Bayou ..... Total depth 3,980 ft.; reaming.
Superior Oil Corp.'s No. 1 Jackson ..... Drlg. sand and shale 3,982 ft.
The Texas Company's No. 1 Jackson, T.&N.O. Sur., Sec. 17 ..... Drlg. sticky shale 3,279 ft.

COLORADO COUNTY

Gulf, Humble and Penn's No. 1 Wilson, John McCroskey Sur. ..... Abandoned 4,701 ft.

GRIMES COUNTY

Deering & Noble's No. 1 Templeman, 6 miles south Navasota ..... Drlg. shale 2,391 ft.

HARDIN COUNTY

D. O. Speights' No. 1 Fee, near Batson ..... Shut down 2,502 ft.

HARRIS COUNTY

Baldwin and associates' No. 1 Kitzman, Cypress ..... Shut down 4,247 ft.
Gulf States Oil Co.'s No. 1 Angsperger ..... Rig.
Humble Oil & Ref. Co.'s No. 8 Warren, Hockley ..... Rig.
Humble Oil & Ref. Co.'s No. 3 Minnetex, Mykawa ..... Drlg. shale and lime 2,500 ft.
Mission Drilling Co.'s No. 1 E. Cook ..... Drlg. sand and shale 1,497 ft.

JACKSON COUNTY

Jackson County Oil Syndicate's No. 8 Drushell, Edna ..... Drlg. sandy shale 3,546 ft.
The Texas Company's No. 1 C. A. Mitchell, G. Ewing Sur. ..... Sand 5,902 ft.; reaming.

JEFFERSON COUNTY

Deep Test Oil Co.'s No. 1 McFaddin, Chaisson Sur. ..... No report.
Gulf Production Co.'s No. 2-A Junker, Fannett ..... Tested salt water in sand 4,578-98 ft.; pulling screen to deepen.
Westbury Oil Co.'s No. 1 West, Choate Sur. ..... Drlg. gumbo 3,756 ft.

LIBERTY COUNTY

Gulf Production Co.'s No. 2 McFaddin, Moss Bluff ..... Rig.
Humble Oil & Refining Co.'s No. 7 Sterling, Moss Bluff ..... Location.
Rycade Oil Corp.'s No. 1 Schettman, John Dugat Sur. ..... Moving in material.
Tucker et al's No. 1 Bell, Devers ..... Derrick.

MATAGORDA COUNTY

Empire Gas & Fuel Co.'s No. 1 Boker, Citrus Grove ..... Spudded.

MONTGOMERY COUNTY

Price & Whitehead's No. 2 Guerges ..... Drlg. shale 2,357 ft.

ORANGE COUNTY

Gulf Production Co.'s No. 1 W. H. Starks, Port Neches ..... Drlg. sand and shale 4,926 ft.
The Texas Company's No. 2 Kuhn, Port Neches ..... Total depth 4,410 ft.; drlg. plug.
The Texas Company's No. 2 Stark, Port Neches ..... Total depth 4,596 ft.; drlg. plug.

REFUGIO COUNTY

Blanco Oil Co.'s No. 1 Dorman ..... Shut down for fuel 2,880 ft.

VICTORIA COUNTY

Houston Oil Co.'s No. 1 McFaddin, C. O. Edwards Sur. ..... Location.
The Texas Company's No. 1 McFaddin, H. Bonny Sur. ..... Drlg. gumbo 1,897 ft.
Lion Oil & Ref. Co.'s No. 2 McFaddin, M. Traviers Sur. ..... Drlg. shale 2,221 ft.
Newton et al's No. 1 West ..... Shut down 1,550 ft.

WALKER COUNTY

Texas State Oil Co.'s No. 2 Foils, H.&T.C. Sur., Abstract 287 ..... Drlg. lime, gumbo and shale 2,359 ft.

WALLER COUNTY

Kirby Pet. Co.'s No. 2 Rogers, San Felipe ..... Drlg. gumbo 3,261 ft.
W. P. Morris' No. 1 Chapman, Donoho Sur. ..... Fishing 2,966 ft.

WASHINGTON COUNTY

W. Birdwell's No. 1 Schram, James Walker Sur. ..... Shut down 2,110 ft.
Clifton et al's No. 1 Pruiss, E. Alcorn Sur. ..... Shut down 1,610 ft.
Sun Oil Co.'s No. 5 Hunt, Clay Creek ..... Rig.
Sun Oil Co.'s No. 4 Janner, Clay Creek ..... Drlg. sand 1,999 ft.
Sun Oil Co.'s No. 3 Witt, Clay Creek ..... Drlg. shale 822 ft.

SOUTH LOUISIANA

ACADIA PARISH

Charles P. Siess' No. 1 Roller, Sec. 8-9s-1e ..... No report.

CALCASIEU PARISH

Wilfred Lahay's No. 2 James ..... Standing 3,970 ft.

CAMERON PARISH

Shell Petroleum Corp.'s No. 15 Watkins, Black Bayou ..... Building derrick.
Shell Petroleum Corp.'s No. 1 State, Black Bayou ..... Drlg. hard sandy lime 1,948 ft.
Vacuum Oil Co.'s No. 1 Cameron Meadows, Sec. 21-14s-13w ..... Drlg. shale 3,960 ft.
The Texas Company's No. 6 State, Calcasieu Lake ..... Rigging up.

IBERIA PARISH

Lake Oil Co.'s No. 1 Ben White, Sec. 54-12s-7e ..... Drlg. 2,100 ft.
Jefferson Lake Oil Co.'s No. 7 Lake Peigneur, Jefferson Lake ..... Drlg. 100 ft.
Jefferson Lake Oil Co.'s No. 8 Lake Peigneur, Jefferson Lake ..... Location.
The Texas Company's No. 5 Vermillion Bay ..... Drlg. sand rock 5,318 ft.

IBERVILLE PARISH

Shell Petroleum Corp.'s No. 5 Wilbert, White Castle ..... Drlg. sticky shale 2,017 ft.
Standard Oil Co.'s No. 5 Wilbert, Bayou Blue ..... Drlg. 2,950 ft.
Standard Oil Co.'s No. 7 Wilbert ..... Derrick.
Standard Oil Co.'s No. 8 Wilbert ..... Drlg. 1,310 ft.
Standard Oil Co.'s No. 1 E. B. and S. P. Schwing, Bayou Blue ..... Driving piling.
Standard Oil Co.'s No. 1 Baist Cooperage, Bayou Blue ..... Building derrick.
Standard Oil Co.'s No. 2 Case, Bayou Des Glaise ..... Location.

JEFFERSON PARISH

Humble Oil & Ref. Co.'s No. 1 Delaware, Sec. 2-16s-23e ..... Drlg. hard sand 1,530 ft.

JEFFERSON DAVIS PARISH

Shell Petroleum Corp.'s No. 1 Heyd, Iowa ..... Location.
Vacuum Oil Co.'s No. 1-A DeVillus, Roanoke ..... Derrick.

LAFAYETTE PARISH

Pure Oil Co.'s No. 1 Marmetin, Carenero ..... Drlg. hard sand 5,055 ft.

LA FOURCHE PARISH

The Texas Company's No. 1 Leesville ..... Total depth 5,448 ft.; drill stem stuck.

PLAQUEMINE PARISH

Humble Oil & Ref. Co.'s No. 1 Lake Washington, Lake Grand Ecaille ..... Drlg. soft sandy shale 5,422 ft.
Humble Oil & Ref. Co.'s No. 2 Cockrell-Moran, Lake Grand Ecaille ..... Dredging canal to location.
Humble Oil & Ref. Co.'s No. 3 Cockrell, Lake Grand Ecaille ..... Cap rock 1,525-44 ft.; drill stem stuck.
The Texas Company's No. 4 State, Garden Island ..... Standing 718 ft.

ST. LANDRY PARISH

Herbert-Baker Oil Co.'s No. 1 Fisher, Sec. 10-3S-4e ..... Fishing 4,378 ft.

ST. MARTIN PARISH

The Texas Company's No. 3 St. Martin, Hager ..... Total depth 2,243 ft. in salt; to test 2,621 ft.

ST. MARY PARISH

Louisiana Land & Exploration Co.'s No. 1 Fox, Berwick ..... Drlg. 3,300 ft.
The Texas Company's No. 1 South Coast, Sec. 41-14s-10e ..... No report.

TERREBONNE PARISH

Freeport Sulphur Co.'s No. 1 Nelson, Sec. 12-21s-11e ..... Drill stem stuck 6,025 ft.; sidetracking.
Charles Paggi's No. 2 Evergreen, Sec. 14-15s-16e ..... Standing 1,818 ft.
The Texas Company's No. 4 State, Bay St. Elaine ..... Drlg. sandy shale 5,522 ft.
The Texas Company's No. 5 State, Bay St. Elaine ..... Location.
The Texas Company's No. 3 State, Caillou Island ..... Drlg. broken sand and shale 2,626 ft.
The Texas Company's No. 4 State, Caillou Island ..... Location.
The Texas Company's No. 5 State, Caillou Island ..... Location.
The Texas Company's No. 3 State, Dog Lake ..... Derrick.
The Texas Company's No. 4 La. L. & E. Four Isle ..... Drlg. hard sand and boulders 1,140 ft.
The Texas Company's No. 2 State, Lake Pelto ..... Abandoned in salt 3,032 ft.
The Texas Company's No. 2 La. L. & E., Bay Junop ..... Building derrick.
The Texas Company's No. 5 State, Lake Barre ..... Rig.

SOUTHWEST TEXAS

(Continued from Page 46)

macher Survey, abandoned location, tearing down derrick.

Cole Pool—Duval County

Henne-Winch's No. 1 R. Benavides, 175 feet southwest line, 205 feet southeast line, Cole Subdivision, Mariano Arispe grant, Block 4, Survey 22; total depth 2,846 feet; abandoned, dry.

Carolina-Texas—Webb County

O. W. Killam's (Carson) No. 6 Webster, 487 feet north line, 150 feet west line, NW SE, Survey 684; total depth 2,631 feet; abandoned.

Jennings-Cuellar—Zapata County

O. W. Killam's No. 1 A. Martinez, 450 feet west line, 450 feet south line, Survey 120; total depth 2,511 feet; abandoned.

Jennings-Muckelroy—Zapata County

W. R. Shankle's No. 3 M. Trevino, 150 feet northwest line, 150 feet northeast line, Block 14, Survey 65; total depth 1,285 feet; flowed oil and salt water; abandoned.

NEW LOCATIONS

Pettus Area—Bee County

Batex Petroleum Co.'s No. 2 Burnett, 361 feet north line, 900 feet east line of lease in the John Pace (South) Survey, rigging up. Houston Oil Co.'s No. 2 Neumann, east offset to Cosden's No. 2 McKinney, in the George A. Kerr Survey, derrick. S. R. C. Co.'s No. 1, Block 19, townsite, center of block, total depth 2,800 feet, drilling. Same company's No. 1, Block 31, townsite, center of block, rigging up. Sun Oil Co.'s No. 1 Burnett, 371 feet north line, 300 feet east line of lease, South John Pace Survey, derrick.

Darst Creek—Guadalupe County

Abercrombie's No. 9 Dix McKean, 450 feet southwest line, 150 feet northwest line 20-acre tract in the J. R. Robinson Survey, location. Humble Oil & Refining Co.'s No. 3 Dowdy, 180 feet northeast line, 60 feet to south of county road on a 52-acre lease, location. Same company's No. 8 D. D. Baker, 980 feet west of southeast corner of 60-acre Baker tract, 150 feet from south line, location. Magnolia Petroleum Co.'s No. 4 L. V. Echols, 400 feet west of No. 3 Echols, 150 feet from the lease line, location. Simms Oil Co.'s No. 4 Manford, location.

Edna Pool—Jackson County

Jackson County Oil Syndicate's No. 8 Drushnell, total depth 3,317 feet, drilling shale.

Kohler Pool—Duval County

Humble Oil & Refining Co.'s No. 48 Kohler, 990 feet south line, 475 feet east line, Survey 172; rigging up.

Randado Pool—Jim Hogg County

Cole Petroleum Co.'s No. 1 Wood, 802 feet from west line, 547 feet southwest line, Block 16, Survey 82; location.

Jennings-Cuellar—Zapata County

O. W. Killam's No. 24-C Cuellar, 375 feet north line, 770 feet southwest line, Survey 278; total depth 150 feet, drilling. Same owner's No. 25-B Cuellar, Survey 277; rigging up. Same owner's No. 1 R. Lopez, Survey 71; rigging up.

Jennings-Muckelroy—Zapata County

Alamo Drilling & Leasing Co.'s (Claggett) No. 4 Trevino, 490 feet east line, 150 feet south line, Block 1, Survey 66; location. Same company's (Claggett) No. 5 Trevino, 150 feet south line, 150 feet east line, Block 1, Survey 66; location. Same company's (Blair) No. 5 Trevino, 450 feet north line, 150 feet west line, Block 1, Survey 66; total depth 1,250 feet. Same company's (Blair) No. 6 Trevino, 175 feet east line, 150 feet north line, Block 1, Survey 66; location. Same company's (Claggett) No. 6 Trevino, 450 feet south line, 150 feet east line, Block 1, Survey 66; location. Allied Gas Co.'s No. 11-A Trevino, 150 feet southeast line, 170 feet southwest line, Block 6, Survey 65; total depth 1,249 feet. Same company's No. 12-A Trevino, 1,350 feet southwest line, 150 feet northwest line, Block 6, Survey 65; total depth 1,251 feet. Same company's No. 13-A Trevino, 150 feet northwest line, 150 feet east line, Block 6, Survey 65; setting 6⅝-inch casing. Same company's No. 14-A Trevino, 470 feet southwest line, 150 feet southeast line, Block 6, Survey 65; total depth 600 feet, drilling. Same company's No. 15-A Trevino, 150 feet east line, 750 feet southeast line, Block 6, Survey 65; derrick. Same company's No. 16-A Trevino, 150 feet northwest line, 1,650 feet southwest line, Block 6 ,Survey 65; location. Edgington & Niles' No. 7-A Trevino, 150 feet southeast line, 150 feet east line, Block 5, Survey 65; spudded in. Gatlen & Matthews' No. 1 Garza, Block 18, Survey 413; derrick. S. R. C. Co.'s No. 4-A Trevino, 150 feet north line, 150 feet east line, Block 8, Survey 66; total depth 1,270 feet, drilling. Same company's No. 5-A Trevino, 150 feet south line, 150 feet west line, Block 16, Survey 66; location. Same company's No. 11-B Trevino, 450 feet southeast line, 150 feet southwest line, Block 7, Survey 65; location. Skoglund & Maddox' No. 1 Montemayor, 150 feet west line, 450 feet north line, Block 5, Survey 65; location. W. R. Shankle's No. 4 Trevino, 450 feet southeast line, 150 feet northeast line, Block 14, Survey 65; rigging up. Same owner's No. 5 Trevino, 1,195 feet north of south corner, 150 feet east line, Block 15, Survey 65; location. Wicker, Arnold & Ahler's No. 3 Garza, 150 feet southwest line, 150 feet southeast line, Block 1, Subdivision Zorro Ranch, Comitas grant; derrick.

DRILLING ACTIVITY

Dobrowolski Pool—Bexar County

Bolling & Michael's No. 1 J. P. Adams, 150 feet south line, 300 feet west line of lease in the Miguel Gortaris Survey, total depth 662 feet, preparing to deepen. Eckert & Son's No. 7 L. Sandemer, 150 feet from west line, 550 feet from south line of 110-acre tract, Survey 52, location. Penn-Tex Oil Co.'s No. 3 Sandemeyer, 300 feet west of No. 2 in the M. Menchacao Survey, location.

Buchanan Pool—Caldwell County

Buchanan and Danciger's No. 2 L. K. Brown, 300 feet north of No. 1 in the C. M. Cannon Survey, set surface casing and shut down.

Darst Creek—Guadalupe County

Empire Gas & Fuel Co.'s No. 5 Dowdy, 792 feet north line, 150 feet east line of tract, in the J. C. Darst Survey; total depth 21 feet; set surface casing. Gulf Production Co.'s No. 2 Malear, 450 feet southwest line, 150 feet northwest line 72-acre tract, in the Jerome P. Alexander Survey; total depth 2,622 feet; drilling. Same company's No. 4 Posey, 488 feet southwest line, 150 feet southeast line of 71acre tract, in the J. R. Robinson Survey; location. Same company's No. 5 Posey, 150 feet south and west lines of tract, in the J. R. Robinson Survey; location. Humble Oil & Refining Co.'s No. 2-A Dowdy, southwest part of Darst Creek, offset to Empire Gas & Fuel Co.'s No. 5 Dowdy, northeast corner of "A" lease; location. Luling Oil & Gas Co.'s No. 1 Goldman, 690 feet southwest line, 150 feet northwest line; spudding in. Magnolia Petroleum Co.'s No. 3 L. V. Echols, 2,400 feet southwest line, 1,100 feet southeast line of farm, in the James Hodges Survey; total depth 2,705 feet; drilling. L. C. Turman's No. 2 State, in the Jacob Darst Survey; total depth 38 feet; resumed drilling. The Texas Company's No. 8-B C. Knoblock, 1,080 feet northeast line, 150 feet southeast line of 75-acre tract, in the J. R. Robinson Survey; location.

Lion-McFadden Pool—Victoria County

Houston Oil Co.'s No. 1 McFadden, 330 feet south, 900 feet east of southeast corner of survey, 1¼ miles southwest of Lion Oil Co.'s gasser, 1¾ miles east of The Texas Company's No. 1 McFadden, in the L. Mann Survey; location. Lion Oil Refining Co.'s No. 2 McFadden, 1,917 feet west of northeast corner, 512 feet at right angles from the north line of the C. O. Edwards Survey, 660 feet east of No. 1, in the M. J. Travesia Survey; total depth 3,100 feet; drilling.

Pettus Area—Bee County

Arkansas Fuel Oil Co.'s No. 1 J. Kimball, 200 feet south line, 200 feet west line of 80-acre tract, in the A. C. Billingsley 249-acre tract, in the Stephen Winship Survey; total depth 2,464 feet; drilling. Buchanan & Ogden's No. 1 Townsite, center of Block 38, Pettus Townsite; total depth 3,915 feet; drilling plug. Cosden Oil Co.'s No. 3 McKinney, 360 feet south line, 800 feet east line of tract, in the South John Pace Survey; total depth 3,655 feet; swabbing. Getty Oil Co.'s No. 1, Block 40, Pettus Townsite, George A. Kerr Survey; total depth 2,350 feet; drilling. Glasscock Brothers' No. 2 Pettus Townsite, center of Block 24; total depth 3,100 feet; drilling. Grayburg Oil Co.'s No. 1 S. D. Copeland, 150 feet southeast corner of north half of William Sanford Survey; total depth 2,330 feet; drilling. Same company's No. 1-A J. A. Kimball, center of 189 acres in the Stephen Winship Survey; total depth 3,568 feet; this test first carried as Grayburg's No. 1 Kimball, is hereafter to be carried as No. 1-A Kimball; now swabbing. Same company's No. 1-B Kimball, 150 feet each way from southwest cor. of 80-acre tract or 2,700 feet east line, 2,100 feet south line of survey, in the Stephen Winship Survey; total depth 3,350 feet; drilling; number changed from No. 2 Kimball to No. 1-B Kimball. Hicks & Young's No. 1 Billingsley, 155 feet south and west lines of tract, in the B. Q. Hadley Survey; total depth 360 feet; reaming to set casing. Houston Oil Co.'s Townsite, center of Block 21; derrick. Same company's Pettus Townsite, center of Block 23; total depth 465 feet; drilling. Same company's Pettus Townsite, center of Block 33; total depth 1,065 feet; drilling. Same company's Pettus Townsite, center of Block 35; total depth 1,040 feet; drilling. Humble Oil & Refining Co.'s No. 5 McKinney, 150 feet south of south line of Pettus Townsite, direct offset to Houston Oil Co.'s No. 1 Beasley, in the G. A. Kerr Survey; total depth 2,410 feet; drilling in shale and lime. Lange & Mimms' No. 1 Billingsley, 155 feet south and west lines of Billingsley 10 acres out of 150-acre tract in the J. Pointevent Survey; total depth 380 feet; waiting on cement after setting 10-inch casing. Rio Bravo Oil Co.'s No. 1 S.A.A.P. Railway, 58 feet north of south line, 120 feet west of west line of Block 3, Pettus Townsite, in the G. A. Kerr Survey; spudded in. Same company's No. 3 S.A.A.P. Railway, in the G. A. Kerr Survey; location. Same company's No. 7 S.A.A.P. Railway, center of A. Smalley Survey; total depth 3,920 feet; coring. S. R. C. Corp.'s No. 1 A. Theis, 2,700 feet north line, 300 feet west line of 782-acre tract, in the R. S. Burns Survey; rigged up and drilling water well. Southerland and others' No. 1 Billingsley, 155 feet south line, 155 feet west line of 40 acres off north end of 150-acre tract, in the B. Q. Hadley Survey; derrick. Swift and others' No. 1 Mauldin, 155 feet north and east lines of 10-acre tract, out of the Mauldin west 125 acres, in the J. Pointevent Survey; total depth 190 feet; set surface casing; waiting on cement. The Texas Company's No. 2 J. R. Scott, 200 feet north line, 150 feet west line, in the J. M. Urango Survey; total depth 620 feet; drilling. Same company's No. 3 J. R. Scott, 7,100 feet southwest of No. 1, J. M. Urango Survey; location. Union Producing Co.'s No. 10 Ray, 150 feet north, 150 feet east of southwest corner of Block 240, G. Neil Survey; total depth 2,654 feet; drilling sticky shale and lime. Same company's No. 15 Ray, 150 feet south line, 150 feet east line of southeast corner of Pettus Townsite, offset to Houston Oil Co.'s No. 1 Beasley; total depth 3,918 feet; waiting on casing. Same company's No. 16 Ray, 150 feet east of Pettus Townsite, offset to Glasscock's No. 1, Block 41; total depth 3,852 feet; waiting on casing. Same company's No. 17 Ray, 1,200 feet north of No. 11; rigged up. Same company's No. 18 Ray, east offset to Buchanan & Ogden's No. 1, Block 38, George A. Kerr Survey; location. Same company's No. 19 Ray, east offset to Block 37, Townsite, George A. Kerr Survey; derrick. Same company's No. 20 Ray, east offset to Humble's No. 5 McKinney, 150 feet south, 150 feet east of southeast corner of Pettus Townsite, George A. Kerr Survey; location. Same company's No. 21 Ray, east offset to Block 40, Townsite, 900 feet south, 150 feet east of northeast corner of townsite, George A. Kerr Survey; location. Same company's No. 22 Ray, east offset to Block 39, 1,260 feet south, 150 feet east of northeast corner of townsite, in the George A. Kerr Survey; location. Wilson & Hill's No. 1 Roberts, center of Block 16, Pettus Townsite; location; waiting on permit under special ruling. Nichols Oil Corp.'s No. 4 Hicks, Jose Maria Uranga Survey; total depth 4,065 feet; drilling.

Lasater Pool—Brooks County

Ed East's No. 1 B. Garcia, total depth 1,109 feet, tested 8,000,000 feet of gas, being worked over.

Pettus Pool—Goliad County

Doctor Hewitt and others' No. 1 Ray, in the B.&B. Survey; total depth 4,210 feet; cored sand.

Cartwright Pool—Live Oak County

Houston Oil Co.'s No. 1 R. Boothe, 300 feet west line, 300 feet south line, M. B. Kilvin Survey; total depth 5,257 feet; preparing to set casing; on drill stem test from 5,252-57 feet filled 300 feet of oil in 12 minutes; moving in heavier rig to set casing. Same company's No. 22 Cartwright, 500 feet east of No. 18, J. M. Colchado Survey; total depth 3,850 feet; drilling in shale.

Agua Dulce Pool—Nueces County

Houston Oil Co.'s No. 1 M. E. Brooks, Los Sauces grant; total depth 5,250 feet; drilling. Saxet Oil Co.'s No. 2 Donnegan, 2,150 feet due south of No. 1 Donnegan; location. Same company's No. 6 John Dunn, 600 feet south of No. 5 Dunn; total depth 4,180 feet; installing heavier rig to drill deeper. South Texas Production Co.'s No. 1 J. A. Daudermann, 450 feet south and north line, 450 feet west and east line of Block 13, SE, Section 32, Benton Pasture Subdivision; total depth 4,000 feet; shut down to repair boiler.

Cole Pool—Duval County

W. E. Mulholland's (Miller I. Shaw) No. 2 S. Benavides, 218 feet north line, 1,050 feet west line, Survey 173; total depth 1,400 feet, drilling.

Kohler Pool—Duval County

South Texas Production Co.'s No. 1 Peters, 2,310 feet north line, 450 feet west line, Survey 298; total depth 1,450 feet, drilling. Simms Oil Co.'s No. 9 Dinn, 660 feet east line, 660 feet south line, NW SE, Survey 143; rigged up, standing.

Schoolfied-O'Byrne Pool—Duval County

C. E. Long and others' (Shell) No. 1 Bishop Duval Land Co., 2,800 feet north line, 160 feet west line, Survey 59; rigged up. Magnolia Petroleum Co.'s No. 1 Lundell, 450 feet north line, 150 feet east line, SE, Survey 60; total depth 5,628 feet, drilling in lime. Same company's No. 1 Hahl-Norton, 885 feet west line, 600 feet south line, Survey 61; rigging up.

Schott Pool—Webb County

George S. Marshall's No. 2 Garcia, 1,170 feet north line, 2,490 feet east line, Survey 458; derrick.

Carolina-Texas—Webb County

Magnolia Petroleum Co.'s No. 1 Jones-Wright, 330 feet south line, 330 feet west line, Survey 674; total depth 95 feet, set 12½-inch surface casing. W. R. Shankle's No. 2 Webster, 1,170 feet west line, 150 feet south line, Survey 684; rigging up. Washington Texas Oil & Gas Co.'s No. 1 R. O. Barnsley, 325 feet south line, 768 feet east line, Block 16, Survey 268; total depth 40 feet, set 10-inch casing, waiting on cement.

Cole Pool—Webb County

French Oil Corp.'s No. 3-A Rosa Benavides, 950 feet north line, 150 feet west line, Survey 659; total depth 1,800 feet, drilling. Magnolia Petroleum Co.'s No. 4 A. Benavides, 950 feet north line, 150 feet east line, Survey 660; total depth 2,335 feet, shut down. O. W. Killam's No. 19 Bruni, Adams Subdivision, Mariano Arispe grant, Block 1, Survey 8; derrick. Same owner's No. 5 Bruni, 270 feet northwest line, 203 feet southwest line, Adams Subdivision, Mariano Arispe grant, Block 26, Survey 8; total depth 3,008 feet, 1,000,000 feet gas, spraying oil, running liner and tubing. South Texas Production Co.'s (Humble) No. 2 S. Benavides, 250 feet northwest line, 150 feet southwest line, Myrtle E. Hale Subdivision, Mariano Arispe grant, Block 24; total depth 2,940 feet, coring.

Pappas Pool—Zapata County

John Pappas Pool, Inc.'s No. 1 Flores,

2,977 feet southeast line, 6,000 feet Rio Grande River, Porcion 35; rigging up.

Charco Redondo Pool—Zapata County

C. R. Moore and J. W. Moore's No. 1 Adela G. de Flores, 330 feet northwest line, 330 feet northeast line, E. M. Doty Oil & Gas Subdivision, Block 99, Charco Redondo grant; total depth 150 feet, set 10-inch casing, waiting on cement. Same owners' No. 2 Adela G. de Flores, 150 feet northeast line, 150 feet southeast line, E. M. Doty Oil & Gas Subdivision, Block 151, Charco Redondo grant; total depth 50 feet, standing. Mid-West Public Utilities' No. 1 Garcia, 450 feet southwest line, 450 feet southeast line of M. P. de Garza tract, Block 33, Pedernal grant; total depth 1,381 feet, standing.

Jennings-Muckelroy—Zapata County

Alamo Drilling & Leasing Co.'s (Claggett), No. 4 Trevino, Block 1, Survey 66; total depth 300 feet; drilling. Same company's (Blair) No. 4 Trevino, 150 feet west line, 150 feet north line, Block 1, Survey 66; total depth 300 feet, drilling. Nordan & Morris and Grimm & Yakey's No. 1 M. Trevino, 510 feet north line, 150 feet west line, Block 5, Survey 412; total depth 700 feet, drilling. Grimm & Yakey's No. 1 E. de los Santos, 382 feet southwest line, 150 feet southeast line, Share 7, Fansler partition, Comitas grant; total depth 1,233 feet, shut down. Nordan & Morris and Grimm & Yakey's No. 1 S. Bustamente, 990 feet northeast line, 150 feet northwest line, Share 34, Fansler partition, Comitas grant; location. Same company's No. 2 C. Bustamente, 150 feet northeast line, 150 feet southeast line, Fansler partition, Comitas grant, Share 33; location. Allied Gas Co.'s (Nordan & Morris and Allen & Morris) No. 3 E. Gutierrez, 4,263 feet southeast line, 750 feet northeast line, Share 4, Fansler partition, Comitas grant; total depth 1,270 feet, bailing. Same company's (Nordan & Morris) No. 2-B M. Trevino, 1,533 feet southwest line, 150 feet northwest line, Block 15, Survey 65; derrick. Same company's No. 9-A I. G. Trevino, 450 feet southeast line, 150 feet east line, Block 6, Survey 65; derrick. Edgington & Niles' No. 4-B I. G. Trevino, 750 feet southwest line, 150 feet southeast line, Block 4, Survey 65; total depth 1,000 feet, drilling. Same company's No. 5-B I. G. Trevino, 150 feet southeast line, 1,050 feet southwest line, Block 4, Survey 65; location. Keen & Jackson's No. 1 M. Garza, 150 feet northwest line, 150 feet southwest line, Block 59, Subdivision Zorro Ranch, Comitas grant; location. S. R. C. Co.'s No. 1 F. Cuellar, 150 feet northwest line, 150 feet northeast line, Block 7, Survey 65; derrick. Same company's No. 8-B F. Cuellar, 150 feet northwest line, 150 feet southwest line, Block 7, Survey 65; derrick. Same company's No. 9-B F. Cuellar, 150 feet southeast line, 150 feet southwest line, Block 10, Survey 65; total depth 1,273 feet, drilling. Same company's No. 10-B F. Cuellar, 150 feet southeast line, 150 feet northeast line, Block 7, Survey 65; total depth 1,244 feet, waiting on casing. Winch & Henne's No. 1 Jose Bustamente, 150 feet southwest line, 150 feet southeast line, Share 35, Fansler partition, Comitas grant; total depth 1,374 feet, shut down, waiting on casing.

Jennings-Cuellar—Zapata County

O. W. Killam's (Killam-Duggan) No. 17-B Cuellar, 150 feet south line, 150 feet southwest line, Survey 277; total depth 1,535 feet, shut down, waiting on casing. Same owner's No. 2 A. Martinez, 150 feet north line, 150 feet east line, Survey 75, Block 15; total depth 1,620 feet, waiting on casing. South Texas Production Co.'s No. 9 Measles and others, 3,830 feet southeast line, 660 feet northeast line, Cerrito Blanco grant; total depth 1,756 feet, drilling.

LA.-ARK. FIELDS

(Continued from Page 49)

acres of 5-year commercial leases centering around Section 26-11-7, Franklin Parish to Arkansas Fuel Oil Co., but the drilling date is indefinite.

Triangle Drilling Co., which is cementing 10-inch at around 500 feet, on its Bossier and Claiborne Parish wildcats, has bought for $10 an acre, 250 acres surrounding Nichols and others' No. 1 McDermott, in Section 28-18-6, Bienville Parish, and is reported negotiating further for a controlling interest in the wildcat which had 10 feet of oil in the hole at 2,358 feet, with the view of taking it over and finishing it. J. P. Evans has assembled 5,300 acres in Bienville and Webster Parishes, centering on Section 31-18-8, and has begun work on No. 1 Crichton, in Section 31-18-8, for a test of the Nacatoch.

P. C. Webb has taken 2,000 acres of a proposed 5,000-acre block around Sparta, Section 22-16-7, Bienville Parish, on 5-year commercial leases. Nesbit & Palmer are building a 7,000-acre block centering on Section 16-17-7, with a 3,000-foot well to be begun by November 1 as consideration. Ohio Oil Co. has bought 300 odd acres in Sections 23 and 35-18-16, offsetting Nichols' well on the north and south, paying $10 to $15 an acre. Pure Oil Co. has had geophysical crews at work around Ringgold, in southern Bienville Parish, east of Arkansas- Louisiana Pipe Line Co.'s recent gas completions on the east side of Lake Bisteneau. The latter completed its fourth producer this week with No. 1 O. G. Thomas, in Section 22-16-10, which gauged 1,900,000 feet of gas from three feet of sand, total depth of 2,578 feet. As part of the play going on in Bienville—Webster territory west of Gibsland, on account of Nichols' well, J. C. Palmer has assembled 6,000 acres centering on Section 16-18-10, for a 3,000-foot test to be begun by October 1, and Smith & Carter of Ringgold have 5,000 acres centering on Section 30-17-9 for a well to be begun by December 1.

Morgan Well Disappointing

Abandoned as a salt water test at 2,062 feet, H. I. Morgan's No. 5 Wetherbee, in Section 21-19-11, Bossier Parish, on the southwest flank of Bellevue Dome, and between two gas wells was decidedly disappointing. Formations shown on the log have geologists guessing. A test at 1,862 feet after a gas show in the oolites was dry. The anhydrite found in other flank wells was missing entirely in this one and the oolites, a lower formation, at around 1,952 feet, were topped higher than the anhydrite should have been found, according to logs of adjacent wells. In Carterville, The Texas Company's No. 13 Wilkinson, NE NE, Section 36-23-12, flowed 156 bbls. the first 24 hours from 10 feet of sand at 3,140-50 feet, total depth 3,158 feet, and Natural Gas Producing Co.'s No. 3 United States Government, NW SE, Section 31-23-11, was junked and abandoned at 3,160 feet.

Hope Production Co. got a big well in the Monroe second sand in the completion of No. 4 Fairbanks, in Section 36-20-4, Ouachita Parish, which gauged 55,000,000 feet of gas at 985 pounds from 8 feet of sand, total depth 2,304 feet. Jordan Drilling Co.'s No. 2 Pereboom, Section 9-18-4, Ouachita Parish, gauged 2,466,000 feet at 970 pounds from 2,145 feet. In Richland Parish, Richland Production Co. completed No. 1 Brown, Section 22-16-6, gauging 37,770,000 feet of gas at 540 pounds, total depth 2,450 feet. Southern Carbon Co.'s No. 1-C M. L. McCoy, Section 1-16-6, gauged 42,192,000 feet at 770 pounds, total depth 2,440 feet. W. D. Ball's No. 1 Krumbholtz, NW NW, Section 32-14-10, Red River Parish, tested salt water at 2,700 feet and was abandoned. Southern Production Co.'s No. 3 Slack, in the NW NW, Section 1-22-11, Sarepta district of Webster Parish, got the water at 2,733 feet and was abandoned.

Only one well in Arkansas, a rank wildcat in Pike County that has been carried on the reports for the last two or three years though it has not turned a wheel in that time, was abandoned by the owners, Tri-State Oil & Gas Co. Taken over from Theodore Davis and associates the new owners, who are too busy in Mississippi to carry on with it in view of discouraging geological reports, abandoned it as a junked hole at 700 feet. Anisman and others' location for No. 1 Hinson estate, in the NE NE. Section 19-4-16, Hot Spring County, recalls the "Malvern boom" of 1922 when a report of a big oil show in a makeshift well drilled by "Old Man Hinson," a negro farmer living near Malvern, with makeshift tools, was followed by a brisk lease play and seven dry holes.

A sudden storm sweeping down from the northwest struck the Urania Field in Winn and LaSalle Parishes, doing much damage to field settlements and nearby towns. Approximately 75 derricks were leveled, putting that many wells, averaging 20 bbls. daily, off production and causing monetary loss of around $26,000.

Loring Oil Co.'s No. 1 CcCann, in the D. B. Green survey of Shelby County, Texas, abandoned as a dry hole at 5,520 feet, was East Texas' contribution to the news of the week. It had failed to pick up any of the shows obtained by the Gulf Refining Co. in adjacent wells drilled during the last two years which made small producers from below 4,000 feet. M. H. Smith and associates have made location on the Hunt 113 acres in the Alfred Johnson survey of Panola County, 10 miles north of Joaquin and 5 miles south of Bethany gas production, for a 2,900-foot test on a block of 3,100 acres. S. E. Bell is building a block south and west of Bethany and has 1,200 acres on 5-year commercial leases.

MISSISSIPPI

Adams County

A. C. Glassell's No. 1 Artonish, shut down, curing titles, total depth 264 feet.

Hinds County

Oscar Brown's (formerly Hennessee and others) No. 1 Riverside, dry and abandoned, total depth 1,050 feet. Cane River Oil Co.'s No. 1 Lufkin, estimated 7,000,000 feet gas, total depth 2,467, waiting on orders.

Capital Oil & Gas Co.'s No. 1 Brown, drilling 1,350 feet; No. 1 Clark, drilling 1,300 feet.

Dome Oil Co.'s No. 1 Elton, coring rock 2,497 feet.

Jackson Oil & Gas Co.'s No. 1 Capital Land & Investment Co., abandoned, salt water in chalk rock, total depth 2,610 feet.

Love Petroleum Co.'s No. 1 Dreyfus, SE NW Section 2-5-1e, location; No. 2 Mendoza, cemented 6⅝-inch on top chalk 2,437 feet.

Marine Oil & Gas Co.'s No. 1 Country Club, drilling lime 2,727 feet.

Miss-Tex Oil Co.'s No. 1 Negro Fair Association, SW cor. NW SE Section 28-6-1e, location.

Universal Gas Co.'s (Weir and others) No. 1 Holliday & Ross, drilling gumbo 1,410 feet; No. 1 Sharbrough, SW cor. SE Section 28-6-1e, began drilling July 29.

Rankin County

Jackson Oil & Gas's No. 1 Patton, shut down, repairing boiler, total depth 1,700 feet.

Ohio Oil Co.'s No. 1 Payne, began drilling July 26, cemented 12½-inch casing 96 feet.

Wilkinson County

A. C. Glassell and others' No. 1 Stowers, shut down, repairing boiler, total depth 1,350 ft.

MICHIGAN FIELDS

(Continued from Page 56)

initial in the Dundee pay sands at 3,540-90 feet, total depth. Limestone was topped at 3,515 feet.

The new gasser is the Isabella Oil Development Co.'s No. 2 Keeler-Mitchell, SW NE, Section 10-14n-6w, Broomfield Township, which first had a flow of 500,000 feet in a stray sand struck at 1,220 feet. At 1,316 feet, the Marshall was topped and gas was hit at 1,328. Drilling was discontinued at 1,340 feet, when the well was reported to be making 2,250,000 feet daily.

Gets Show of Oil

A showing of oil was struck in the Wesche No. 1 of the Chartiers Oil Co., SE NW NW, Section 29-15n-3w, Denver Township, and the No. 2 Wesche also is nearing the Marshall formation on the lease directly south of the P. J. Marthey lease of the New York Petroleum Royalty Corp., in Section 19, Denver Township.

No. 2 Marthey is shut down waiting for cement to set after casing through a 2,500,000-foot flow of gas from the Marshall to a total depth of 1,510 feet. It will be carried to the Dundee.

Gibson, Johnson & Borden's No. 2 Cole, NE SW SW, Section 19-15n-3w, Denver Township, is drilling ahead after casing off a flow of about 6,000,000 cubic feet of gas and the Ohio Producing & Refining Co.'s No. 1 Epple, SE SW, Section 19-15n-3w, Denver Township, is shut down for cement to set.

One of the few oil wells completed in the state this week was the Muskegon Oil Corp.'s No. 9 Stanley Daniloff, SW SW SW, Section 5-10n-16w, Muskegon Township, which has about 40 bbls. a day initial production. Oil was struck in the lower Traverse pay sand and it was shot to a depth of 1,894 feet.

CALIFORNIA FIELDS

(Continued from Page 56)

Nos. 2 and 3 on the Long Beach property of the Signal Oil & Gas and No. 6 Duncan and No. 4 Simplex of the Richfield Oil Co.

Potrero

The Richfield Oil Co. is completing preparations to make a production test of No. 1 Coffin, a deep well in the town lot section of the Potrero Field of Los Angeles basin, and its potentiality may be determined within the next day or two. This well, bottomed at 6,258 feet with a string of 9-inch landed and cemented at 6,110 feet, may determine the future status of this field as far as deep production is concerned because it is a foregone conclusion that considerable drilling and deepening work may be precipitated if substantial production is developed. The upper zones have failed to sustain intensive development, although a number of wells have liquidated drilling costs because of the superior quality of oil produced and its consequent higher value.

In addition to No. 1 Coffin, the Richfield Oil Co. is working on another interesting test in this field which may ultimately prove equally as important. This is No. 1 Sloan, which is at the present time rotating ahead in an oil sand at 6,080 feet. Both of these wells are considerably deeper than the lowest producing horizon in the Potrero Field at the present time and the outcome of work is consequently being watched with considerable interest because a new zone may prove an important factor. York & Lockhart's No. 2 Willis is another important test under way in the town lot section of the Potrero Field as this project is rotating ahead in an oil sand of undetermined potentiality at 6,304 feet. George F. Getty recompleted No. 33 Springs, a former upper zone producer in the Santa Fe Springs Field, and it was returned to production doing 930 bbls. of 33.9 gravity oil per day from the Hathaway zone at 8,000 feet.

San Joaquin Basin

Completions in San Joaquin Valley fields were few and far between during the past week. The only well of importance finished in this section during the past seven-day period was the Chanslor-Canfield Midway Oil Co.'s No. 35, a new well located out on the west front of the Kern River Field. This new well was good for 245 bbls. of 15.2 gravity oil per day from 2,258 feet. This company's well No. 87, located in the Midway-Sunset Field of Kern County in Section 8-32-23, has been delayed for the past several weeks because of water trouble but should be in a position to make a bid for production shortly. The Barnsdall Oil Co. picked up the oil sand in No. 1 Son-Crail, located out in the Maricopa Flats section of the Midway-Sunset Field in Section 8-11-23, and an early production test is anticipated. No. 6 Havenstrite of the California Western Oil Co. is also rotating ahead in the oil sand and should consequently be eligible for completion shortly.

Several new wells were spudded in at both Mount Poso and Round Mountain during the past week. In the former field the General Petroleum spudded in No. 32 Heisen and is hauling in rig material for No. 7 Sill, a new well located in Section 26-28-27. In the Round Mountain Field the Chanslor-Canfield Midway

Oil Co. spudded in No. 1 Poso in Section 6-28-29, while the Shell started work on No. 4-3 Jewett in Section 19-28-29. Considerable new work is getting under way in the Porterville district of Tulare County where the Terra Bella Oil Co. recently indicated the possibility of developing commercial production of a paraffin base oil around the 900-foot level. With two new wells in the oil sand, the potentiality of this area should be determined in the near future. None of the major companies appear overly enthusiastic about this district, although several have acquired protective acreage in case this area is found more productive than expected. The Shell has resumed drilling operations in No. 1 Porter Day, a wildcat located in the Weed Patch area in southeastern Kern County, and will core ahead carefully before making another production test.

CANADIAN FIELDS

(Continued from Page 53)

No. 1 test in LSD 7 was carried to 4,345 feet but did not test the lime.

In LSD 5, Section 21-19-3w5, Alberta Superior Oils' No. 1 is reported preparing to resume drilling. This test, spudded in last fall and carried to 65 feet, has been held up owing to difficulties regarding drilling equipment.

In Section 4-19-2w5, Mercury Oils No. 2, LSD 12, is cleaning out; initial production was estimated around 100 bbls. following a shot. Outfit is being moved from Mercury's No. 3 producer in LSD 2 to Mercury's No. 1 in LSD 13, to resume at 4,585 feet. Mercury's No. 5 is at 4,002 feet and running casing after sidetracking lost tools. Mercury's No. 7 is working on derrick. Miracle Oils' No. 1, LSD 11, is reported drilling at 4,150 feet. Mill City Petroleums' No. 1, LSD 14, is at 5,065 feet and has developed only a small production after several shots. It is being placed on production for the present. Mill City's No. 2 will be located later, probably as an offset to the best of the Mercury producers in the same section.

In Section 16-19-2w5, East Crest Oil Co.'s No. 1, LSD 5-6, is reported drilling at 4,446 feet after rigging rod brake to facilitate drilling against gas pressure. East Crest's No. 2-A, LSD 4, is reported drilling at 4,201 feet.

North Turner Valley

In North Turner Valley, Model Oils' No. 1, LSD 8, Section 22-20-3w5, has increased its recovery to 150 bbls. a day. Anaconda Oil Co.'s No. 1, LSD 16, same section, is repairing at 3,575 feet.

United Oils' No. 4, Section 24-20-3w5, which has been taking light crude production from the Dalhousie sands at 5,420 feet, is being cleaned out to restore production and may be deepened to the lime.

Central Turner Valley

In Section 1-20-3w5, Central Turner Valley, Calmont Oils' No. 1, LSD 2, is drilling more than 330 feet in the lime at 5,800 feet depth. The test has some wet gas production. Okalta Oils' No. 2, LSD 8, which got the lime at 4,800 feet, is running and cementing casing. Okalta's No. 1, LSD 1, is rigging cable tools to clean out and restore production. Okalta's No. 3, LSD 9, is drilling in the lime at 4,255 feet. Midfield Oil Co.'s No. 1, LSD 9, is drilling at 3,950 feet. Sioux City Oils' No. 1, LSD 10, is drilling at 5,210 feet, 825 feet in the lime. McLeod Oil Co.'s No. 5, LSD 15, is running casing to the Home sands at 4,350 feet, where a small show of light crude was struck. McLeod's No. 3, LSD 16, is bailing mud in the course of cleaning operations to restore production.

Mid-Royal Oils' No. 1, LSD 4, Section 31-19-2w5, has arranged to complete its well, which has been standing at 2,140 feet. Structure Oil & Gas' No. 1, LSD 7, same section, is drilling at 4,450 feet.

In Section 36-19-3w5, Dome Oils' No. 2, LSD 16, 400 feet west of Royalite's No. 23 producer, has spudded in and is down 100 feet or more.

In Section 12-20-3w5, New McDougall-Segur's No. 4, LSD 14, got the lime at 4,800 feet and is cementing 8¼-inch casing at 4,856 feet before drilling in. New McDougall-Segur's No. 3 is at 5,112 feet and repairing. British Dominion Oil Development Corp.'s No. 3, LSD 6, has resumed drilling after running 10-inch casing to 1,928 feet. It is planned to test production first in the McDougall sands before going to the lime.

Spooner Oils' No. 4, LSD 14, Section 13-20-3w5, is drilling at 3,460 feet.

Red Coulee Field

On the Montana end of the international Red Coulee structure, Inland Petroleums' No. 1, offsetting Rice & Radigan's No. 1 producer, is reported to have drilled into big production at 2,252 feet. After drilling 6 feet into the same, the well made around 225 bbls. a day. The test spudded in June 11 and got its first show on July 22. At 2,477 feet a gas flow, estimated 5,000,000 feet a day, was struck; this gas was brought under control and will be marketed in the field. Additional tankage has been moved in and swabbing is in progress. This makes a total of four producers on the Canadian side of the field and eight in Montana.

Ohio Oil Co.'s No. 2 Farbo is deepening after getting a gas flow, estimated 4,000,000 feet a day in the Vanalta sand at 2,488 feet. A small gas flow was struck in the Sunburst between 2,400 and 2,430 feet. Cosmos Petroleum's No. 2 Thacker, Section 2-37-4w, is fishing at 2,175 feet. Rice & Radigan's No. 2 is reported drilling at 900 feet, and Hannah-Porter's No. 2 at 200 feet. Vantana Petersen's No. 1, SW Section 22-34-4w, is drilling around 1,000 feet. Nellie Jane-Farbo's No. 1 is drilling around 300 feet.

On the Alberta end of the structure, Taylor Syndicate's No. 1, offsetting Vanalta's No. 2 producer, is drilling at 1,100 feet. McLaughlin Oils, Ltd., has been incorporated under Alberta charter with head office at Lethbridge and will drill its No. 1 test in LSD 5, Section 10-1-17w4, northwest of Ko-Top's No. 1.

Southern Alberta's No. 1, LSD 8, Section 3-1-16w4, is shipping crude regularly to Imperial Oil, Ltd.; production commands $1.65 a barrel. A permanent rig is being erected and drilling outfit is being skidded to No. 2 location. Vanalta's No. 2 producer, Section 4-1-16w4, has also fitted up permanent rig. Capitol Oil & Gas Co.'s No. 1, LSD 3, Section 21-1-16w4, is drilling out cement in the Madison lime at 2,753 feet. Dalco Oil & Gas Co.'s No. 1, LSD 4, Section 11-1-16w4, got the lime at 2,640 feet and is drilling at 2,645 feet after running casing.

Celtic Oils' No. 1, LSD 4, Section 17-1-16w4, is drilling below 1,900 feet. Dalco Oil & Gas Co.'s No. 2, LSD 7, Section 19-2-17w4, is shut down.

On the Montana side, Askalta Oils' No. 1, south of the central producing zone, is reported drilling below 150 feet.

Ontario Operations

In the Ontario fields, Union Natural Gas Co.'s No. 13 John Dawson farm, Lot 147, North Talbot Road, in Raleigh Township, has added another large producer to the new D'Clute gas field. Production was encountered around 1,575 feet, and a shot developed 3,000,000 feet a day. The well has been tubed and shut in. It offsets the American Engineering Co.'s No. 2 just south of the Talbot Road, which was also a large gasser. Union's No. 12 Sykes farm, Lot 15, Concession 15, Raleigh Township, is drilling around 1,050 feet and preparing to run casing.

In the Dawn Field, Lambton County, Union Natural Gas Co.'s No. 47, W half, Lot 19, Concession 1, Dawn, finished at 1,715 feet. A fishing job developed at 1,705 feet and fishing continued about five days, after which the hole was deepened 10 feet without increasing production. Initial flow is estimated at 1,650,000 feet a day.

In Mosa Township, Middlesex County, near Newbury, Southern Ontario Gas Co.'s No. 3 got an estimated flow of 50,000 feet of gas between 1,520 and 1,525 feet. Water was encountered, and the crew is running casing and will bail well and measure gas production.

In the Oil Creek area near Waterton Lakes, in southwestern Alberta, Patrick Oils, Ltd., of Calgary, is preparing to start active drilling on acreage in Sections 30-1-30w3 and 25-1-1w5. The company holds 100 acres on the site of the first oil discovery in Alberta. A test drilled in the first named section by Rocky Mountain Development Co. in 1901 encountered light oil at 1,020 feet with an attested production for weeks of 300 bbls. a day.

In the province of Quebec, a test by the Twin Cities Oil & Gas Co. on the north shore of the St. Lawrence near Lanoraie is reported to have encountered a strong gas flow with 500 pounds pressure at a depth of around 200 feet.

KANSAS FIELDS

(Continued from Page 44)

3,300 feet. Garden and others' No. 1-A Sluss, SE cor. SW NE, Section 6-27-6, has been abandoned at 3,178 feet. Aladdin Petroleum Corp. and others' No. 1 Metzer, C NW SE, Section 23-28-3, is a dry hole at 3,125 feet.

Chautauqua County

Griffin & Bell's No. 2 Curran, CWL NW NE, Section 12-32-10, has been completed for 1,500,000 feet of gas in sand 1,973-87 feet.

Cowley County

McKnabb and others' No. 2-C Johnson, NW cor. SW NW, Section 28-33-3, is drilling at 320 feet. No. 1-C Johnson, SE cor. SW NW, Section 28-33-3, is drilling at 450 feet. Gallup and others' No. 2 Brant, C SW NW, Section 8-32-5, has been abandoned at 760 feet. Crow and others' No. 1 Bowman, C SE SE, Section 8-32-5, has been completed for 250,000 feet of gas in sand 700-15 feet. The Prairie Oil & Gas Co. is moving the rig in for No. 1 Harris, C SW SE, Section 17-31-6.

Ellis County

Phillips Petroleum Co.'s No. 1 Owen, SE cor. SW, Section 32-11-17w, is a dry hole at 3,911 feet. The Texas Company and Skelly Oil Co.'s No. 1 Shutts, NW cor. SE, Section 5-12-17w, has been completed for 450 bbls. in sand 3,648-56 feet. Davis and others' No. 5 Weiland, NW cor. SE NE, Section 1-13-16w, has been completed for 157 bbls. in sands 3,034-39 feet and 3,076-80 feet.

Elk County

Denton and others' No. 1-A Brown, NE cor. SW, Section 12-30-9, is dry and abandoned at 1,790 feet. Producers & Refiners Corp.'s No. 1 Williams, SW cor. NW, Section 36-30-9, an old well, was deepened to 2,687 feet and abandoned.

Ellsworth County

E. W. Marland, Inc., and others made location for No. 1 Barecky, C E half E half NW, Section 3-16-10w.

Greenwood County

Aladdin Petroleum Corp.'s No. 1 Harris, SE cor. NE SW, Section 19-22-11, has been completed for 410 bbls. in sand 2,025-71 feet. Sheedy and others' No. 1 Nivon, NW cor. NE NE, Section 5-24-13, is dry and abandoned at 1,695 feet. Mendenhall and others' No. 2 Hollister, CWL NE SE, Section 5-25-13, has been completed for 1,800,000 feet of gas in sand 1,447-74 feet. Tidal Oil Co.'s No. 2 Stanhope, NE cor. NW, Section 22-26-8, made 25 bbls. in sand 2,435-46 feet. No. 5 Stanhope, SW cor. NW NE, Section 22-26-8, made 30 bbls. in sand 2,420-82 feet. The Prairie Oil & Gas Co.'s No. 2 Newhouse, CEL SE NE, Section 1-24-11, is dry and abandoned at 1,876 feet.

McPherson County

Palmer, Lario and others' No. 1 Ritz, SW cor. NW SW, Section 6-20-1w, is a rig under construction. Simmons & Canary and others' No. 1 Anderson, C SW SW, Section 14-17-1w, is dry and abandoned at 3,602 feet. McPherson Oil & Gas Development Co. and Shell Petroleum Corp.'s No. 1 Giffin, C NW, Section 14-19-2w, has been completed for 10,170,000 feet of gas in chat 2,912-53 feet. Sinclair Oil & Gas Co.'s No. 1 Morehouse, NW cor. NE, Section 4-21-3w, has been completed for 1,176 bbls. in sand 3,350-82 feet.

Morton County

Argus Production Co.'s No. 1 Chambers, C NW, Section 25-33-40w, has been completed for 7,000,000 feet of gas in sand 2,563-2,853 feet. No. 1 Mangell, C SE, Section 4-33-39w, has been completed for 2,000,000 feet of gas in sand 2,570-2,890 feet. No. 1 Littell, C SE, Section 24-34-40w, has been completed for 7,000,000 feet of gas in sand 2,554-2,902 feet. No. 1 Thompson, C SW, Section 7-34-39w, gauged 5,250,000 feet of gas in sand 2,584-2,900 feet. No. 1 Rolla State Bank, C NW, Section 8-34-39w, tested 5,000,000 feet of gas in sand 2,587-2,852 feet. No. 1 Dorth, C NE, Section 20-34-39w, has been completed for 7,000,000 feet of gas in sand 2,581-2,850 feet.

Marion County

Palmer & Wixon have rig on ground No. 1 Robinson, SW cor. NW, Section 15-20-5e.

Morris County

Arrow Oil & Gas Co.'s No. 1 Wilds, SE cor. SE, Section 15-17-7e, has been abandoned at 1,512 feet.

Reno County

Alco Royalty Co. and others' No. 1 Kinney, SE cor. SE, Section 16-22-7w, is a rig on the ground. McBride and others' No. 1 Bacon, SW cor. NE SW, Section 36-23-5w, is dry and abandoned at 3,934 feet.

Russell County

The Prairie Oil & Gas Co. and T. B. Slick's No. 1 Berrick, SE cor. SE SW, Section 23-15-13, gauged 20 bbls. in sand 3,302-24 feet. Mid-west Exploration Co.'s No. 34 Mermos, SW cor. SE NW, Section 32-13-15w, has been completed for 30 bbls. in sand 3,330-36 feet. Day and Keys Petroleum Co.'s No. 1 Dortland, NE cor. NE, Section 8-14-15w, has been completed for 55 bbls. in sand at 3,061-3,340 feet. Imo Oil Co.'s No. 1 Brown, NW cor. SE NE, Section 7-14-14w, is dry and abandoned at 3,328 feet.

Sumner County

The Prairie Oil & Gas Co. and S. P. Clark have rig under construction for No. 1 Olsen, CEL SW SE, Section 34-34-2e.

Rice County

Producers & Refiners Corp.'s No. 2 Thompson is a rig under construction, SW cor. SE NW, Section 21-20-10w. Lassen and others' No. 1 Parrish, NW cor. SW, Section 10-21-10w, is a location.

Sedgwick County

Fisher & Lauck's No. 3 Trustee, NE cor. NW SE, Section 19-27-2e, is a rig under construction. No. 4 Trustee, SE cor. SW SE, Section 19-27-2e, is a rig on ground. No. 5 Trustee, SW cor. SE SE, Section 19-27-2e, is a rig under construction. Derby Oil Co.'s No. 1 Rimel, NW cor. NE NE, Section 30-27-2e, is a rig on ground. Six Forty Oil Co.'s No. 1 Braley Airport, SE cor. SW NW, Section 6-28-2e, is a rig on ground.

Stevens County

Missouri-Kansas and others' No. 1 Crawford is a location, C SE, Section 34-32-38w. Argus Production Co.'s No. 1 Bunyan, is a location, C SW, Section 23-33-37w. No. 2 Mitchell is a location, C NE, Section 12-35-38w. No. 1 Moon, C SW, Section 18-35-38w, is a location. No. 1 Mitchell, C SW, Section 7-35-37w, is a location. Argus Production Co.'s No. 1 Roach, C NW, Section 34-32-38w, gauged 5,000,000 feet of gas at 2,585-2,886 feet. No. 1 Ratcliff, C SW, Section 8-33-37w, tested 2,000,000 feet of gas at 2,493-2,773 feet. No. 3 Armstrong, C SE, Section 3-34-39w, has been completed for 12,000,000 feet of gas in sand at 2,578-2,903 feet. Trees Oil Co.'s No. 1 Mitchell, C SE, Section 3-35-38w, tested 7,000,000 feet of gas in sand at 2,615-2,818 feet.

Woodson County

Spencer and Derby's No. 1 Guy, SW cor. NE NW, Section 29-23-15e, has been completed for 30 bbls. in sand at 1,528-48 feet. Henderson and others' No. 1 Wilhite, SW cor. NE SW, Section 14-26-13e, tested 250,000 feet of gas in sand at 670-96 feet.

DEATH OF D. R. McWILLIAMS

SHREVEPORT, La., Aug. 4.—D. R. McWilliams, purchasing agent for the Palmer Corp. (Louisiana Gas & Fuel Co.) for the past 15 years, died at his home here July 27 suddenly from a heart attack. He was 56 years old and is survived by his widow and two sons, and a sister and brother living in Georgia.

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CHARTERS—Delaware best, quickest, cheapest, most liberal. Free forms. Colonial Charter Co., Wilmington, Del.

(Additional Classified on Page 150)

Consumption Heavy in Chicago Area

Jobbers Placing Orders for Entire Monthly Allotment of Gasoline. Prices Easy but Improvement Expected

By John B. Waldo

CHICAGO, Aug. 4.—Gasoline consumption is heavy over the territory and distributors are ordering freely. The gasoline movement is very heavy right now on contract, jobbers placing their orders for the entire monthly allotment under their contract. The spot demand is also fairly active. Prices are still easy in spite of the heavy movement but there are some indications that there may be a strengthening of the market towards the close of the month and that somewhat better prices may be obtained for September. The August business has been placed for the most part and too much gasoline has been bought at low prices for delivery over the month to permit of any material improvement now.

The Group 3 market showed a little more strength this morning judging by prices quoted but the improvement did not extend to the Chicago market where the same prices prevailed.

The intense heat, while helping in the sale of gasoline, is slowing up business in other products and there was very little doing in any other material. Kerosene continues to be very slow in this market although the movement right now is a little better than it has been. Prices are easy and 3 cents can be had by jobbers from reliable refiners who are makers of good kerosene. Quite a number of contracts for the season's supply of domestic burner oil have been closed by jobbers who have been slow in many cases in closing their arrangements for the winter supply of domestic burner oil. The heavy industrial fuel oils are still quiet although the industries are beginning to resume operations. Some of the automobile plants are starting today. Prices for good fuel oil and for the gas oils are steady but some offerings of off grade material are made at a little less than the market today.

Bright stocks are reported to be very quiet as to demand and easy in tone. Some eastern oil was quoted as low as 23 cents refinery and the price on the western bright stocks is not fully maintained as sales are reported at 25 cents.

Uniform Contracts Disappearing

Uniformity of gasoline contracts seems to be disappearing. Each refiner has a form of contract which he has found is acceptable to a majority of those with whom he does business. These contracts of various refiners differ in many ways. One's contract guarantee is to be 4 cents below the tank wagon while that of a neighbor will guarantee a margin of 5 cents below the normal service station. In point of safety both to refiner and customer, the margin based on the tank wagon should be considered the better contract, but it sounds larger to say that the contract allows a 5-cent margin, so some stick to the 5 cents under the service station price. All refiners deplore the present method of averaging quotations from a number of publications or of averaging the quotation from one publication to give them the market price date of shipment.

Some refiners are trying to make contracts with jobbers who have contracts with other refiners. Naturally there must be some additional attraction in the contract offered to induce the jobber to give up his old connection. The basis of any contract for a supply of gasoline should be a first class quality of motor fuel, but when a refinery can go out and make close to 100 contracts in the Indiana territory with good jobbers, most of whom already had contracts with refiners of high standing, evidently there is some additional incentive for the jobber to sign the new contract.

The refiner may assert that the contract is a straight 5 cents below the service station price with nothing in it which could be considered an exceptional concession to the jobber. The refiners who have lost their customers insist that the 5 cents below service station is merely the starting point of the negotiations and that in actual practice the contracts call for guarantees of 5½ to 6 cents, for allowances for advertising and for the delivery of practically a 60-62, 415 endpoint gasoline in place of the U. S. Motor gasoline, which is specified in the contract.

Nothing New in It

None of these things are new in the least. In the old days, when the usual contract called for 56-58, 450 gasoline for seven months and for 58-60, 437 for five months of the year, a good account would be supplied with the higher gravity for the life of the contract. Today there are jobbers whose accounts are such that they receive the 60-62, 415, or close to that endpoint on their U. S. Motor contract.

One refinery sales manager, asked if he had lost any of his contracts through the efforts of another refiner to build up a line of contract customers, replied that he had been able to renew every one of his contracts. His contract is 4 cents under the tank wagon market. His refinery does a good deal of advertising for its customers and its service in the way of uniformity of product is excellent. There is evidently good feeling between this refiner and his contract customers which enables the refiner to build up a list of steady accounts which stick.

The gasoline market closed July with a large quantity of distress material offered, or what was practically refiners' distress gasoline. The differential territory to the east of the Mississippi River had the most of the low price offers as it is this part of the Indiana territory that has the greatest number of spot buyers. West of the Mississippi, in Iowa and Minnesota and in Wisconsin, for that matter, the freight rates are against the shipping of gasoline or other material from the refineries in the Central West. The market in these states is so largely a market of buyers on contracts that little spot material is moved into them.

Prices in a general way were 6 cents and a little higher west of the river and 6 cents and a little lower east of the river. In the Detroit district, some exceptionally low prices were quoted for immediate delivery and over August, but generally over the territory east of the Mississippi low prices ruled. Some reliable jobbers say they were able to buy U. S. Motor gasoline full specifications at 5¾ cents. The higher gravities were quiet and some low prices were made on the 60-62, 400 endpoint material. One of the larger integrated companies bought 200 cars and the head of the organization asserted that the price was nearer 5 cents than 5½ cents, but some real quotations were made of 5¾ to 6 cents Group 3. The 375 endpoint gasoline was not as badly cut, but some low prices were named. On the other hand, the antiknock material is in strong demand and the sale of Ethyl Gasoline is away ahead of last year with those who had that gasoline in 1929 in spite of the fact that there are so many more refiners blending the Ethyl Gasoline and so many more stations have it for sale. One of the large integrated companies in this territory is stated to sell as high as 70 per cent of its gasoline in the residential districts. In the business districts, where they have more trucks and delivery cars to fuel, their sales of Ethyl drop to 30 per cent of their total at these stations.

Consumption Heavy

The consumption is heavy in all parts of the territory right now. In the Northwest, where the tourist trade was about two weeks late in getting a good start, tourists are as numerous as ever and jobbers in that territory who have been doing business there for several seasons report that their gasoline business is better than a year ago.

With increased consumption and the gradual reduction of stocks the market should improve as we get further into August and away from the hangovers and distress material which were in the market at the close of July.

The demand for natural gasoline was improving last week and prices were a little stronger.

Kerosene is a little more active in this market, but reports from the country indicate that some refiners are selling the trade direct at 3 cents for 41-43 water white kerosene. The jobbers in some instances are stocking the kerosene in place of distillate, which is almost as high in price. One reason which has influenced them to do this is the high quality of domestic furnace distillate that some of the major companies are distributing through their own stations or through their contract accounts. The kerosene will equal the best of these and at 3 cents cost less than some of these special furnace oils.

It has been suggested that a blend might be made of a certain volume of this kerosene with a gas oil to make a less expensive distillate. The combination would carry the flash and fire of the kerosene and the endpoint of the gas oil. Jobbers state that their kerosene business is much less than a year ago and attribute the decline in part to the increase in the use of electric lights and in part to the use of distillate for tractor fuel.

Furnace Oil Demand Light

The immediate demand for domestic furnace oils continues light as might be expected with such hot weather. The sales are reduced to a minimum and prices are unchanged for these small shipments. The larger business of the coming season is about to begin. There is some buying of gas oil and distillate for storage and some of the late comers are closing their contracts for their supplies but as yet there is only this occasional business coming along on the season which begins October 1.

The low price of kerosene makes it difficult for the average distillate to sell at more than 2⅞ cents. Zero gas oil is firmly held at close to 2½ cents for the kind of gas oil that a distributor of home burner oil wants. There may be some with a bad odor that is seeking a market but it is not desirable for home burner use at any price. The higher gravity fuel oils are also firmly held. There is more immediate movement on these than on the distillates or gas oil as there is some industrial consumption. The prices of the 28-30 gravity on which there was such a shortage part of the time last season, are firmly held when the oil is a true zero oil.

There is no improvement in the demand for industrial fuel oils in this market. Some concerns are starting their plants, while others are closing down. This is usually the case during August. Where the plants are not closed down, they are operating at a fraction of their capacity. The conditions are not unusual nor to be considered as necessarily unfavorable.

There have been some purchases of 18-22 zero fuel oil for storage, the oil being wanted more for heating than for power; also some buying of the higher gravities for storage. The quantity of these purchases is not large as a whole, running usually from five to ten cars. What is lacking in the industrial fuel oil situation is the great volume of business that comes from the large plants for the use of their power equipment. That this will come later is regarded as certain. The demand for oil for heating which is possibly one-third of the normal volume of oil consumed, will come along late in September, possibly a little earlier if there should be a cold spell.

Few Price Changes

Prices have not undergone any material change. Disquiet has been caused by an offer to supply material from a well known refinery at prices below the present level of the market for such material; deliveries to be as late as October. The offer as made was to supply 18-22 zero fuel oil, low sulphur and viscosity, over August, September and October, shipments to be of equal quantity each month at 47½, 50 and 52½ cents respectively. This offer would not be so far out from present conditions although it is an almost universal belief that this quality of oil is bound to be scarce this winter, but it is asserted in connection with the oil in question that it has actually been sold for October delivery only, at less than 50 cents, which is decidedly below what all oil men believe such an oil should sell for at that time. Oil men here are firmly convinced that unless something entirely unforeseen happens in the industry, the prices of good 18-22 zero and, in fact, all zero oils of reasonably low viscosity and sulphur content, will be much higher than at present and will cause an advance in all grades of fuel oil that can be used in industrial plants.

Rather a novelty in the fuel oil market is the shipment of fuel oil from Muskegon to Detroit and Cleveland. The shipments were made by the Old Dutch Refining Co., and are stated to be the accumulation of considerable runs mostly for special naphthas. The method of transportation by barge over the regular lake route is a money-saver to the buyer and makes it possible to sell so cheap a material for such a distant delivery. There have been rumors of an invasion of the western territory by fuel oil from the East and incidentally it is currently stated that gasoline imported from Venezuela has been actually delivered at Detroit. The fuel oil situation is one of waiting, either for cold weather in the case of the domestic burner oils and similar oils used for heating, and for the beginning of the active demand from the industries in the case of industrial fuel oils. The latter should come first. In the meantime there is some business for the dealer who gets out and hustles for it.

Business in Motor Oils Good

The business in motor oils is good, but the bulk of it is being done by refiner-compounders or the compounders who buy their material, not refining any of it. Jobbers are having a good consumption and are forced to fill in on their stocks of the most desirable oils. There are so many of the new motor oils seeking the favor of buyers that it seems strange that any one of them should report, as some of them do, that their business is good and that the refinery is weeks behind in filling orders. The demand is largely for the best oils, often those which cost the most, as if a costly oil was necessarily a better oil.

The demand for refinery stocks is light right now. Bright stocks are still quoted here at 25 cents for Pennsylvania and 28 cents for western bright stocks. Naturals are easy in tone if not quotably lower.

(Continued on Page 150)

Inactivity Rules in Eastern Markets

Steady Undertone Discerned in Most Refined Products and Oil Industry Generally Views Outlook With Optimism

By A. E. Mockler
New York Bureau, The Oil and Gas Journal, Rooms 1919-21, No. 154 Nassau Street

NEW YORK, Aug. 4.—East Coast refined products markets are again marking time, a fairly steady undertone being discernible in most branches, and the industry in general viewing the outlook for the rest of the summer season with somewhat more optimism. Volume of business on gasoline is forging ahead steadily, with sales of Diesel and fuel oil also of good volume. On the remainder of the line, however, demand still leaves much to be desired.

The problem of liquidating surplus stocks of gasoline appears to be working itself out, due to refinery curtailment, and the industry pins much of its faith in the ultimate stabilization of the market on continued moderation of refinery operations on the part of major factors in the industry.

Preliminary reports indicate that the move of the American Petroleum Institute to ascertain actual working stocks of principal products required by the industry, with a view to ultimate reduction of surplus holdings of refined products to the levels so determined, has met with favor in the industry and that the necessary support will be forthcoming to make this project a success. This should be a potent factor in bringing about a correction in the surplus holdings totals of refined products.

Tank Car Gasoline

The refinery gasoline market has shown little change during the last week. The posted price named by a majority of the principal factors remains unaltered at 9 cents per gallon for U. S. Motor at the refineries.

There is still a good deal of price cutting in the refinery market in the East, but the intensity of this shading, as well as the volume of motor fuel involved, both appear to be lessening. While 8 cents was being freely done by smaller interests a fortnight ago, it appears that "bottom" this week is 8¼ cents, with more of the competitive trading being done at 8⅛ cents and upward. This development, according to well-versed market operators, reflects a material lessening in stocks of distressed gasoline in east coast markets, rather than the development of firmer market sentiment. Recent price slashing, it is stated, was prompted not so much by lack of confidence in the market position as by the actual need in some quarters for turning surplus holdings into cash, and with the correction of this situation, the scene appears cleared for a gradual and normal seasonal strengthening in the motor fuel market.

Premium fuel sales at the refinery continue to show gains, and the volume on these extra quality fuels for the year will show sharp increases, both in gallons and percentage totals, over 1929 sales.

Tank Wagon Gasoline

The retail division of the market is still reflecting the somewhat chaotic conditions which have prevailed in the refinery market during the last several weeks. While posted price schedules have not been altered in this territory, price cutting is being indulged in on an extensive scale, and even the brands of the leading marketers are involved in instances where independent distributors are cutting prices to meet the competition of other brands.

Numerous stations in New York territory are retailing gasoline at seven gallons for $1, including tax, although the general level is somewhat higher than this figure.

Gallonage in the eastern seaboard area is running ahead of last year's totals, but the industry is apparently grossly oversupplied from the standpoint of pumps, and the multiplicity of filling stations, with resultant duplication of facilities, is adding both a costly and unnecessary burden on the industry, which is bound to be reflected in the earnings statements of marketing concerns. While executives of the large companies are bending every effort toward the elimination of wasteful duplication of retail facilities, no solution to this problem is yet in sight. Most of the larger units in the industry, however, continue to adhere to a policy of adding independent stations to their own company chains, and this trend, it is expected, will ultimately result in stabilization of the retail situation here.

Premium fuels, which hitherto have remained practically free from the price slashing which has characterized ordinary motor fuels, are now coming in for their share of attention from the price cutters.

Lubs

The cylinder oil market appears on the upgrade, and, while no further price advances have materialized during the week, the undertone is definitely stronger, and it appears that most of the distressed stocks have been cleaned up in recent trading.

Refiners in the field are showing definitely stronger views on all grades of cylinder oils, and domestic consumers, who have remained out of the market to a considerable extent for the past few months, are again buying in close to normal volume, with inquiries from the export division of the trade indicating an early revival in demand for cylinder oils for shipment abroad.

Curtailment of production of Pennsylvania crude, with the liquidation of considerable quantities of storage holdings of cylinder oils in that area, have done considerable toward readjusting the position of the market, operators here state, and predictions of a gradual upswing in selling prices during the remainder of the year are being freely voiced.

Red and pale oils are meeting with seasonably active demand, quotations remaining unaltered on all grades.

Wax

Jobbing demand for paraffin wax has shown further improvement this week, and the market remains steady at advanced levels put into effect during the previous week. There have been some fairly large inquiries in the market, and sellers expect a marked improvement in volume during the month just starting.

Export buyers are understood to have booked considerable tonnage during the price slump of the closing half of July, and these purchases should be reflected in export figures during August and September. The domestic trade is also buying somewhat more freely, it is stated, and refiners' stocks, while large, are not as burdensome as was the case a month or so ago.

Fuel Oil

There has been a well-sustained movement of bunker "C" oil against standing contracts this week, and the market remains firm at $1.15 per barrel, in bulk, at refinery terminals. Small interests, which were reported shading the posted quotation in some trades, are understood to be back at the $1.15 level on current sales, and the outlook for the market for the remainder of the third quarter is more favorable.

Conservation of crude production, accompanied by a curtailment in refinery runs, is expected to result in an appreciable strengthening of the statistical position of the fuel oil market, and, while refiners in this area are dubious regarding the possibility of a higher market by the close of 1930, some interests still profess to believe that the market will go into 1931 with bunker "C" established at $1.25 a barrel at east coast ports.

Diesel Oil

Contract withdrawals of Diesel oil are holding up well and the market is steady and unchanged at $2 per barrel at refineries. Refiners have adjusted production to consumption rather well in this area and the Diesel oil market, from a statistical standpoint, is said to be in much better position than many other refined products.

Movement of Diesel oil from California and South America into the eastern seaboard area is small, and the market remains largely in the hands of refiners operating in this area. Strength in the ocean tanker market is expected to make for a continuance of this situation for some months to come, and refiners profess to see little danger of any adverse price movement in this market.

Current sales of Diesel oil in the New York harbor area are considerably larger than was the case a year ago at this time, and reports of the large interests operating at principal east coast ports indicate that this situation prevails at other points as well.

Gas Oil

The market is far from strong and business is along hand-to-mouth lines in most instances. The posted price is unaltered at 5¼ cents per gallon for 28 plus recycled oil, but this figure is largely nominal, and current business is going through at concessions of a quarter to a half cent per gallon in most instances.

California refiners are understood to have considerable surplus gas oil which they are offering for shipment East at attractive levels, and this has been far from a bullish factor in the local market. Some of the Pacific Coast surplus stocks, it is reported, comprise 32 gravity straightrun gas oil, which would meet with a good demand for cracking stock if available locally at favorable price levels. To date, however, no cargo fixtures involving this California oil have been reported.

Gulf Export Market

Inquiries for three cargoes of 64-66 and Navy Gasoline, aggregating 18,000 tons, are in the market this week, but up to the time of writing none of this business had been confirmed. The three cargoes are destined for France.

The French marketing subsidiary of a prominent American company was reported to have booked two cargoes of 64-66 gasoline this week with the parent American company. The gasoline, according to reports, is to be shipped from the Gulf and was booked on the basis of the export association posted schedule.

Kerosene movement at the Gulf has been rather sluggish during the week, with practically all of the inquiry for small lots for immediate shipment. The kerosene market is in easy position, and buyers abroad are inclined to remain out of the market in anticipation of a lower market later on in the season.

Gulf sellers have been getting a fair volume of business in lub oils during recent weeks, but most of these oils have been moved out at extremely low prices, reflecting the break in eastern markets, it is reported.

There was no trading in Venezuelan or Mexican crude oils reported during the week under review.

Export buyers, it is reported, are closely watching the trend of gasoline production in the United States, and it is believed that the first definite sign of an upturn in prices in domestic markets, due to curtailment of refinery runs and consequent lowering of surplus holdings, will be the signal for a considerable buying move on motor fuels for shipment abroad.

The large integrated companies, with foreign marketing subsidiaries, are shipping gasoline abroad in large volume, sales thus far in the year being reported in excess of those for the comparable months of 1929.

Petroleum Exports

There was some slackening off in export movement of refined petroleum products from New York during the week ended July 26, but this was believed to be but a temporary lull, and export operators were inclined to look for a material pick-up in volume over the remainder of the summer months.

Foreign distributing agencies, it is reported, are still carrying smaller than usual holdings of lubricating oils, greases, waxes and other similar minor products, and operators in these lines believe that current low prices in the American market will be instrumental in stimulating foreign buying of these articles.

The following table shows principal exports of refined petroleum products from New York for the past three weeks (all figures in gallons unless otherwise noted):

	Week ended		
	July 26	July 19	July 12
Gasoline	130,000	590,000	395,000
Naphtha	.....	3,060,000	585,000
Kerosene	42,000	25,000	155,000
Fuel oil	10,000	936,000	30,000
Lubricating oil	1,345,000	4,505,000	2,417,000
Petroleum, refined	200,000	1,150,000	1,325,000
	Pounds		
Petrolatum	7,000	5,000	150,000
Paraffin wax	1,200,000	950,000	1,305,000
Refined	200,000	25,000	50,000
Scale	100,000	330,000	60,000
Lubricating grease	675,000	940,000	325,000

Considerable of the open market business in gasoline and naphthas for export has gone to the Gulf market thus far in the year, owing to the more attractive position of the market in that area. Practically all of the American gasoline exported thus far in 1930 through private sources at quotations under the posted basis at the Gulf has been from that area or California, east coast sellers having adhered to the posted export schedules.

Imports

Imports of crude and refined petroleum at the principal United States ports for the week ended July 26 totaled 1,935,000 bbls., a daily average of 276,428 bbls., compared with 2,125,000 bbls., a daily average of 303,571 bbls. for the preceding week and a daily average of 298,107 bbls. for the four weeks ended July 26. Details follow:

	Bbls. of 42 gals.
At Atlantic Coast ports—	
Baltimore	238,000
Boston	115,000
New York	904,000
Philadelphia	255,000
Others	208,000
Total	1,720,000
At Gulf Coast ports—	
Galveston district	66,000
New Orleans and Baton Rouge	84,000
Port Arthur and Sabine district	65,000
Total	215,000
Daily average	30,714
At Atlantic and Gulf Coast ports—	
Total	1,935,000
Daily average	276,428
Daily average four weeks	298,107

Distribution of total imports is as follows:

Crude	1,318,000
Gasoline	273,000
Gas oil	17,000
Fuel oil	327,000

California Oil Receipts

Receipts of California crude and re-

(Continued on Page 150)

PIPING ENGINEERS

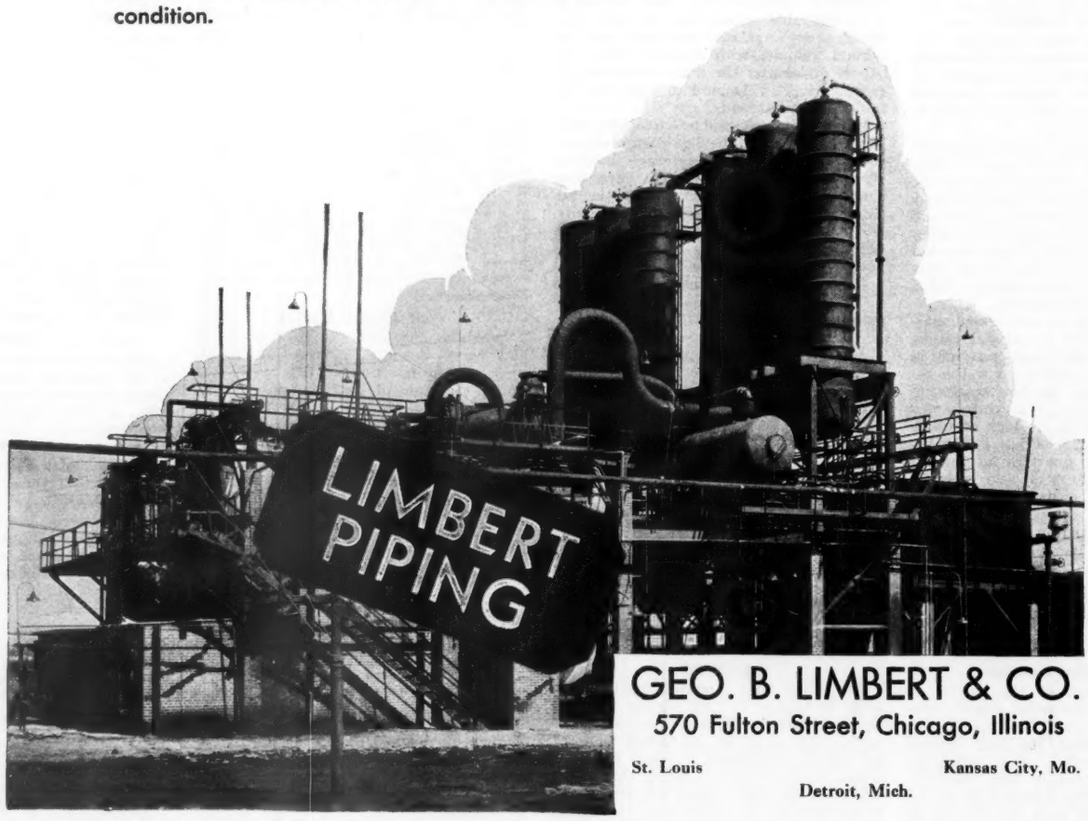
That Know How

Modern high pressure, high temperature piping demands skill, experience, and the best of manufacturing facilities.

These things Limbert has. Thirty years of specialized experience on difficult piping of all kinds with installations all over the world . . . A proven engineering staff capable of design and versed in the problems of installation as well as the problems of manufacture . . . A big plant with every modern facility for fittings, joints, and fabricated pipe from the simplest job to the most complicated power plant or refinery installation.

Use Limbert to manufacture ordinary requirements or to design and manufacture special piping for every power plant or refinery condition.

A typical cracking still piping installation furnished complete by Limbert



GEO. B. LIMBERT & CO.
570 Fulton Street, Chicago, Illinois

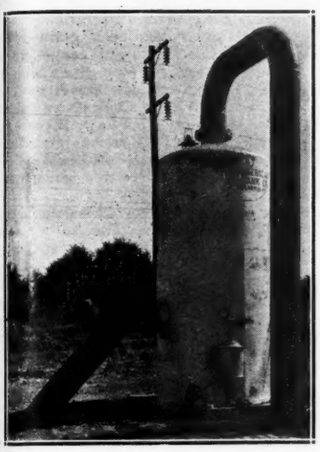
St. Louis Kansas City, Mo.
Detroit, Mich.

Manufacture of Natural Gasoline

LIQUID LEVEL CONTROL DEVICE PROTECTS PLANT

Charles C. Chaney, superintendent of the natural gasoline plant of the Wirt Franklin Petroleum Corp. in the Oklahoma City Field, has perfected a liquid level control device which has facilitated the operation of the plant.

The control is attached to a gas scrubber and serves as a protection to the plant in that any liquid accumulation is



Liquid level control attached to scrubber.

automatically dumped at the scrubber. Due to the unusual operating conditions in the Oklahoma City Field, manufacturers have had difficulty in keeping liquid from passing the gas scrubber and getting into the plant.

The large gas volume and heavy flow of crude from new wells coupled with the constantly changing conditions due to curtailment programs is responsible for this situation. Occasionally a slug of crude gets into the gas line. The Chaney device as shown in the accompanying picture through a liquid level control assures that liquid will not pass through the scrubber into the plant.

DIFFICULT TASK IN BUILDING EQUIPMENT

Several difficult problems had to be solved in the recent construction of a natural gasoline plant for the Equitable Gas Co. at Rogersville, Pa. The plant, which will extract the gasoline from the gas which serves Pittsburgh, is located at a point which is not readily accessible.

After hauling the heavy equipment overland with special truck and caterpillar tractor equipment, the next problem was to erect the several units with the facilities available. As explained by W. S. Church of the Byllesby Engineering & Management Corp., when the foundations were ready the various units were reloaded on trucks with the aid of Caterpillar tractors and placed in position on foundations. An important problem was the erection of these units on the foundation safely and at a reasonable cost.

The A-frame was adopted. The legs of this frame are made of 16"x18" timber, reinforced in the center with 12"x12" members. The frames are 45 feet high, and the hoist lines were of seven-eighths-inch steel cable, two sets of triple sheave blocks being used.

When everything was in readiness for the lift, two 60 horsepower caterpillar tractors were hitched to the hoisting lines and the heavy units were raised onto their foundations. The large unit weighed 66,000 pounds.

JUNE PRODUCTION LESS THAN MAY WITH SMALL GAIN OVER LAST YEAR

The production of natural gasoline during the month of June, 1930, according to the Bureau of Mines, amounted to 179,300,000 gallons. This represents a daily average of 5,980,000 gallons, which is 150,000 gallons below the daily average of the previous month and is only 30,000 bbls. higher than the daily production for June, 1929.

The production of natural gasoline in the Oklahoma City Field again increased, but the output of the remainder of the State, exclusive of the Seminole district, fell off materially. Production in the other two major producing states, California and Texas, also showed a material decrease during the month. Stocks of natural gasoline on hand at the plants on June 30, 1930, totaled 38,974,000 gallons, an increase over the previous month of only 317,000 gallons.

NATURAL GASOLINE, JUNE, 1930
(Thousands of gallons)

	Production				Stocks end of month	
	June 1930	May 1930	June 1929	Jan.-June 1930	June 1930	May 1930
Appalachian	6,000	6,700	6,300	50,700	4,861	4,939
Ill., Ky., etc.	800	1,000	900	6,900	626	587
Oklahoma:	52,900	*54,000	57,400	311,500	17,303	16,704
Oklahoma City	3,800	3,600	(†)	15,900	670	859
Osage County	6,100	6,100	6,400	37,900	4,913	4,606
Seminole, etc.	24,900	24,900	30,900	144,500	4,410	3,903
Rest of State	18,100	*19,400	20,100	113,200	7,310	7,336
Kansas	2,700	3,000	2,600	16,900	1,518	1,530
Texas	38,600	42,100	32,500	235,000	11,014	11,566
Panhandle	18,800	21,900	12,800	118,800	4,841	4,945
North Texas	3,500	3,800	3,900	21,800	1,062	1,397
West Central	12,700	12,600	12,200	73,400	4,454	4,572
Rest of State	3,600	3,800	3,600	21,000	657	652
Louisiana	5,600	6,000	4,800	38,800	795	709
Arkansas	2,800	2,800	2,600	15,800	270	337
Rocky Mountain	4,600	4,600	4,100	25,100	763	675
California:	65,300	69,700	67,300	410,300	1,824	1,610
Long Beach	13,500	14,400	19,200	86,200	.....	.....
Ventura Ave.	4,800	4,900	6,800	30,300	.....	.....
Seal Beach	2,000	2,300	3,500	15,600	.....	.....
Huntington Beach	2,600	2,700	3,400	17,500	.....	.....
Santa Fe Springs	16,500	17,200	19,300	112,800	.....	.....
Rest of State	26,900	28,200	15,100	147,900	.....	.....
Total	179,300	*189,900	178,500	1,111,000	38,974	38,657
Daily average	5,980	6,130	5,590	6,140	.....	.....
Total (thousands bbls.)	4,269	4,521	4,250	26,452	928	920
Daily average	142	146	142	146	.....	.....

*Revised. †Included under "Rest of State."

Construction and Operation

PERSONNEL

In the last analysis, in any manufacturing industry, management and machinery alone do not build success. To clinch success in the fullest measure the honest support of every last man is vital. In the natural gasoline industry, where dollar-of-capital-investment-per-man-on-the-payroll is unusually high, this is particularly of great importance. It is not at all unusual to see the operation of a $25,000 plant in the hands of four operators, or that of a $1,000,000 property manned by 12 men. Each man has a distinct part to play. Upon each depends the success of the operation.

The progressive manufacturer features the co-operative nature of the enterprise. In return for his performance of a set of duties, the employe has first call on the company's income. He receives his paycheck whether the owner of the company obtains a dividend or not. If the earnings justify it, he is quite apt to receive a bonus. More than likely his company is carrying insurance for him or offers him participation in a "provident fund" or in an employe stock purchase plan. The measure of benefits of this character depend to a great extent upon the profitableness of the company's operations, and that means — to put it broadly — that it depends upon the men themselves.

The heads of companies preach this "gospel." The head of a department has to apply the principle to specific cases. He must strive to inculcate these ideals into the minds of the rank and file. How is it best done?

Teaching New Worker

In the first place, he must bring to the men an intelligence of their operations. He must set up the machinery to thoroughly teach the new worker. In an industry where improvement in equipment and processing goes on day after day it is manifest that the story of the changing art must be told to those who practice it. Articles in trade and technical journals and papers read at conventions are of no mean value.

Some of the larger organizations publish biweekly or monthly bulletins in which divers phases of plant operation are discussed in an instructive and entertaining manner. In other organizations operators' meetings are held periodically where manufacturing problems are "aired." The writer has been present in many operators' meetings where subjects appearing in company bulletins were discussed, and he can attest to the value of these meetings as well as the publications referred to. In a private gathering of this sort, men speak their minds, who would not nod their heads in a public intercompany meeting.

The writer often discusses plant inspections, referred to in the preceding article, in his departmental bulletins. The men, whose plant has been inspected, are keen to learn what was "found," while the staff of other plants simply want to see the news. A plant is more apt to find commendatory remarks than criticism, and the men thereat know that if an incident is cited it is for the lesson it teaches, be it praiseworthy or condemnatory.

If a rectifier operator loses the reflux on his top trays and allows a few thousand gallons of gasoline to go over into the residue, the best efforts of the stillman to maintain the most desirable temperatures and pressures on his absorption and distillation unit have been put to naught. The cause of the trouble and its remedy can be discussed with profit. If the "treater" or storage plant attendant allows tanks to run over or allows gasoline to be carried out into the residue gas by not giving proper attention to storage tank, pressure regulators, he nullifies the possible splendid work of line walker, engineer, oiler, stillman and superintendent.

In this business, where one cannot see his raw material, a certain prescribed procedure must be carried out in the processing. Every man must do his duty if the results are to "click." They "click" when the gasoline is in the tank car.

*Twenty-second of a series of articles explaining the inner workings of a natural gasoline organization. The series was prepared by an operator actively engaged in all phases of construction and operation.

GOVERNMENT IS STUDYING GASOLINE STORAGE LOSS

Gasoline is frequently subject to shrinkage by evaporation during its journey from the refinery to the consumer. As part of a general study of evaporation losses, the petroleum experiment station maintained by the United States Bureau of Mines and the State of Oklahoma at Bartlesville, Okla., has started a series of observations on bulk storage tanks.

A group of five all-steel welded tanks, each tank approximately 10 feet in diameter and 20 feet long with a capacity of about 12,000 gallons is being studied. Four of the tanks are equipped with 2-ounce pressure relief valves and one-half ounce vacuum relief valves; the fifth tank with a 5-pound pressure relief valve and a one-half ounce vacuum relief valve. Of the four tanks equipped with the 2-ounce pressure relief valves, one is painted red, the second aluminum, the third is covered with aluminum foil .004 of an inch, while the fourth tank is painted white and partly housed with asbestos sheathing. The fifth tank, which is equipped with the 5-pound pressure relief valve, is painted aluminum. On each tank is mounted an instrument for obtaining a continuous record of the temperatures and pressures in the vapor space of the tank. Each tank contains approximately 8,000 gallons of stabilized gasoline.

These tanks will be under study for about three months during the hottest part of the year, when avaporation is greatest.

ANNOUNCE NEW LABORATORIES

Dr. E. H. Leslie and Dr. H. B. Coats have organized the Leslie Laboratories with headquarters at Traver Road, Ann Arbor, Mich. The laboratory will offer a general service to refiners and natural gasoline manufacturers including physical, chemical and engineering research and development work, chemical treatment, dewaxing and the various processing operations.

Doctor Leslie for a number of years was a professor of engineering at the University of Michigan. He is considered an outstanding authority in refinery technology, having served as consulting engineer for various companies.

CONTRACT FOR PRODUCTION

CHATHAM, Ontario, Aug. 4.—Vacuum Oil & Gas Co. and Acme Gas & Oil Co. of Toronto have closed a contract for the sale of gas from their wells at Mabee, in Norfolk County, Ontario, to the Southern Ontario Gas Co. The latter will distribute to Ontario consumers through the Dominion Natural Gas Co. system.

Brief Items for Petroleum Refiners

May Change Crude Line From Casper To Move Gasoline

The possibility that the Standard Oil Co. of Indiana may change the crude oil pipe line extending from the Salt Creek Field in Wyoming to Freeman, Mo., to transport gasoline from its Casper, Wyo., refinery is being discussed in trade circles where the probabilities of additional lines between refining and consuming centers are widely discussed.

The Salt Creek to Freeman line was acquired by the Indiana Standard last month when it purchased the remaining half interest in the Sinclair Pipe Line Co. system from the Sinclair Consolidated Oil Corp. The line was built several years ago to transport crude oil from Wyoming fields to Freeman, Mo., where it joined the main Sinclair system from the Mid-Continent to Chicago.

Due to the decline in crude oil supplies in Wyoming the line has not been in operation for approximately two years. The line is a combination 10 and 12-inch and has a minimum capacity of 25,000 bbls. daily.

It is pointed out that the line could be readily connected to the Casper, Wyo., refinery of the Midwest Refining Co., subsidiary of the Indiana Standard which operates the plant. The refinery has a rated capacity of 50,000 bbls. daily and is complete in its operations. Due to lack of desirable market outlets the plant is only operated part capacity.

The Casper refinery furnishes the bulk of the supplies for the Standard stations in the Rocky Mountain territory. The Standard only recently entered this territory direct and its distribution is not large. The entire territory is sparsely settled and for that reason, is not a large consumer of petroleum products. The gasoline consumption in Wyoming, for instance, averages approximately 2,000 bbls. daily.

Need Market Outlet

Part of the Casper gasoline and kerosene output is moved into Middle Western but even in the nearby States of North Dakota, South Dakota and Nebraska the rail charges are high. For several years it was necessary to move large quantities of the gasoline to the Gulf Coast for export movement.

The present crude oil line extends from the Salt Creek Field across Nebraska and Northeast Kansas. This is not a large consuming territory and the eastern terminus is near the Sugar Creek, Mo., refinery of the Indiana company. It is pointed out that part of the line could be relaid to service a territory which is not close to any of the Standard refineries.

The Indiana company's situation, it is contended, is similar to that of the Standard Oil Co. of New Jersey which started the long distance movement of gasoline by pipe line, when it decided to convert the crude oil line of the Tuscarora Pipe Line Co. extending through Pennsylvania and New Jersey. The Tuscarora line was no longer needed for crude oil transportation and the parent company was forced to find another use for the line or junk it.

The Standard of Indiana officially has not indicated what use it expects to make of the Salt Creek-Freeman line.

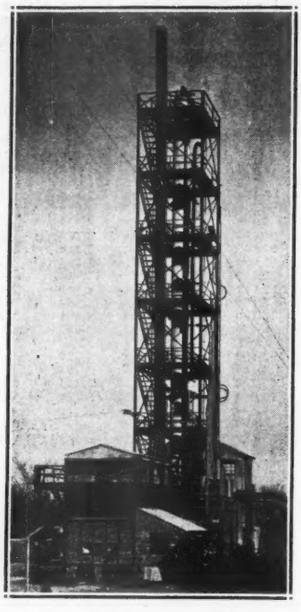
PHILLIPS CHICAGO OFFICE

R. N. Mullins, who recently resigned as division manager for the Conoco Oil Co. (Continental Oil Co.) will open a Chicago office for the Phillips Petroleum Co. He has been succeeded by George J. Woods, who has been division sales manager of the Continental Oil Co. at Kansas City and Ponca City, Okla.

TO INVESTIGATE SPECIAL PHASES OF REFINING AT UNIVERSITY PLANT

By Fred W. Padgett* and Ben Shultz†

The refinery located on the campus of the University of Oklahoma represents a part of the equipment of the School of Petroleum Engineering and is used for purposes of instruction and research. The



Refinery at University of Oklahoma, Norman, Okla.

unit has a capacity of from 200 to 300 bbls. per 24 hours. In the operating of the unit, crude oil is received in car load lots on the siding located one-half mile from the plant and is pumped to storage through a pipe line. The crude oil is purchased on the basis of posted price and the products secured are used by the University Department of Utilities. In this way it is possible to realize a small profit from each shipment sufficient to cover depreciation.

The unit is for straight distillation; that is, the separation of those products occuring naturally in the crude oil. At present it consists of a tube still and one atmospheric tower with vaporizing chamber at the bottom. Seven products are separated from the tower, gasoline vapor from the top, residue as liquid from the bottom and five streams (kerosene, gas oil, light, medium and heavy lubricating oil distillate) as liquids from the side of the tower. The tower is 92 feet in height, 3 feet in diameter, and has four stripping sections and 48 bubble plates. Superheated steam is introduced into the vaporizing chamber as well as in the stripping sections located in the tower above the vaporizing chamber. It requires about six hours to bring the unit on stream.

The principal result secured up to the present time in the operation of the unit has been to place it on a practical operating basis. With the control equipment now installed, the operation, after starting up, is practically automatic. This leaves the operators, except one or two, free to collect data during the run. By means of this control equipment, the transfer temperature (tube still outlet) and the temperature at the top of the tower are held practically constant at any desired valve. The latest installation of equipment for securing data is a unit consisting of 10 thermocouples and a 10-point switch connected to a scale indicating temperature. These thermocouples are located at points in the plant where temperature readings are important.

Superheated Steam

Therefore, from the standpoint of practical, smooth and continuous operation the plant leaves little to be desired. During the coming year it is planned to determine just what can be accomplished

(Continued on Page 152)

*Professor Petroleum Engineering, University of Oklahoma. †Refinery superintendent, University of Oklahoma.

START OPERATING NEW OKLAHOMA CITY PLANT

The Black Gold Refining Co., the first new refinery to be built in Oklahoma City, Okla., since the development of large crude oil production in that area, started operating last week.

The refinery is the skimming type, Gasoline, kerosene, distillate, gas oil and steam refined cylinder stocks will be secured from the operation. The plant has a rated capacity of 1,500 bbls. daily and is now refining approximately 750 bbls. daily. All the light oils will be sold locally and the steam refined stocks has also been contracted.

D. A. Corcoran, former vice president in charge of sales for the Wirt Franklin Petroleum Corp., is president of the company. W. E. Netherlin is superintendent of the plant.

BAYWAY HYDROGENATION UNIT READY TO OPERATE

NEW YORK, Aug. 4.—The hydrogenation unit of the Standard Oil Co. (New Jersey), located at its Bayway, N. J., refinery, has been completed and is now ready for operation. The unit will be operated one month on an experimental basis following a program which already has been outlined.

The results of this operation will be made known to companies affiliated with the Hydro Patents Co., Inc. This company recently was organized to take over the development of the process in the United States. Most of the larger refining companies have stock in the company.

The results obtained with the Bayway unit and the investigation now being made by a party of technologists in Germany probably will determine the line of development which will be taken in this country. Additional units of the process are under construction at the Baton Rouge, La., refinery of the Standard Oil Co. of Louisiana and the Baytown, Tex., refinery of the Humble Oil & Refining Co.

TO BUILD SUPER STATION

CHICAGO, Aug. 2.—Don E. Waggoner, who operates the 30 odd Waggoner stations in Chicago, has leased a corner at Ashland Avenue and Otto Streets and plans to erect a large service station. The site adjoins one of the largest outside department stores. The station will furnish a complete service including gasoline, oil, washing, brake service and the like. Plans for the building have been approved and the structure is under way.

SUN OIL CO. WIDENING ITS PIPE LINE SYSTEM

NEW YORK, Aug. 5.—Sun Oil Co., which is constructing a pipe line from its Philadelphia refinery to Pittsburgh and points in Ohio, is materially widening the territory covered by its pipe line transportation system reports received here indicate. It is indicated that the company will substantially broaden its marketing operations in New York State and the Great Lakes region when the gasoline line goes into operation.

The company has been granted permission by the Toledo city council to lay an 8-inch gasoline pipe line from its Toledo refinery through the city to the old Hocking Valley Coal docks on the Maumee River where Sun will construct a marine terminal to serve Great Lakes tankers opening up considerable Great Lakes territory where the company is not now active.

The main line from Philadelphia will also have a branch line to Syracuse where the company has a large marine terminal on the barge canal. As originally announced the Sun Oil Co. planned only a gasoline pipe line from Marcus Hook to Pittsburgh, but present plans indicate that Sun will widen its marketing operations on a broad scale through the utilization of pipe lines for transporting gasoline from refinery terminals to consuming markets and marine terminals, whence its products can be advantageously shipped into territories where the company has not previously been a factor.

RICHFIELD OPERATING FIRST MARINE STATION

NEW YORK, Aug. 2.—Richfield Oil Corp. of New York on Tuesday launched at Bayway, N. J., the first of a fleet of floating marine service stations, which will be used to fuel seaplanes and watercraft in eastern waters.

The floating service stations, developed by Richfield engineers in conjunction with Kindlund & Drake, naval architects, embody a number of new features, principal of which are the all-welded construction and the placing of all tanks under decks. The marine stations will measure 50'x30', draw 4 feet of water, have a 3-foot freeboard, and will have capacity for 30,000 gallons of gasoline and lubricating oils.

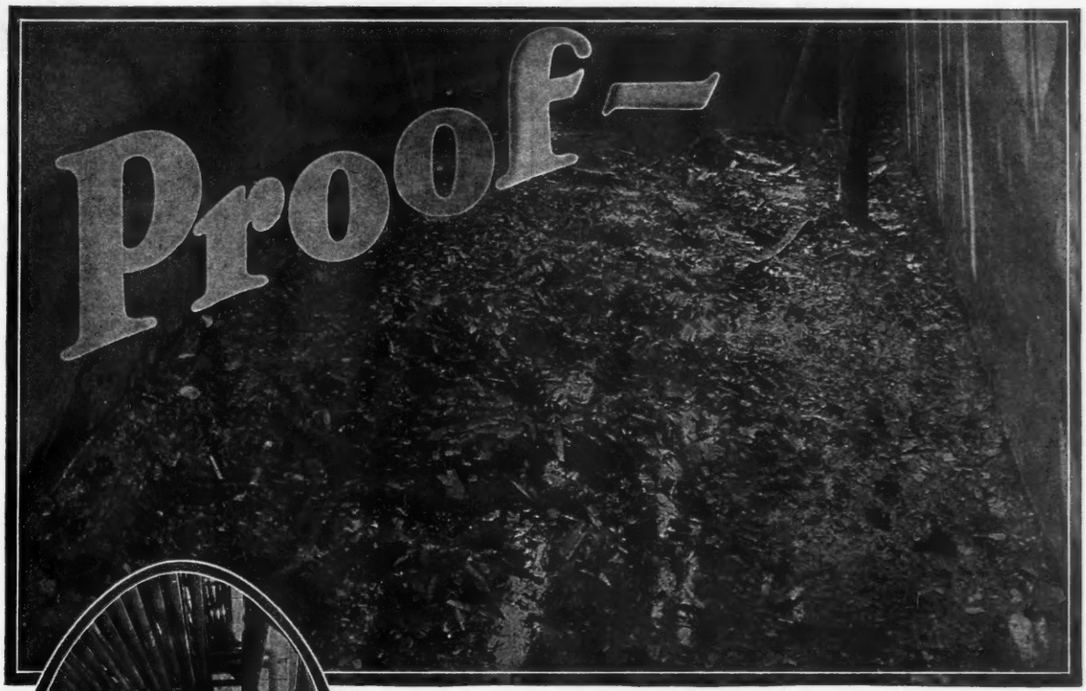
The deck roofing will be painted in the Richfield colors of cream and blue, checkered to make for ready identification from the air, and will be illuminated for night fueling of seaplanes. After the launching of the first of these floating stations, it will be towed to Red Bank, N. J., to remain there until after the Gold Cup races, and will then be taken to Newport for the international yacht races. Construction of additional marine service stations has been started.

GOWER RESIGNS

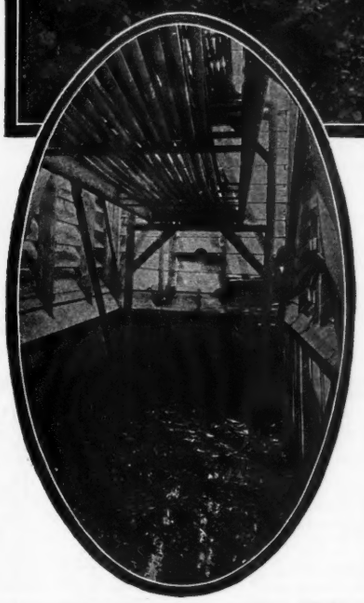
CHICAGO, Aug. 2.—Charley Gower has resigned from the Cosden Oil Co. of Illinois and will engage in the service station business on his own account. Mr. Gower was formerly with the Sterling Refining Co., local distributor which sold out to the Cities Service Oil Co. He subsequently started the United Petroleum Co., which was taken over by the Cosden Oil Co.

GREENHOUSE RESIGNS

CHICAGO, Aug. 2.—Clifford Greenhouse has resigned from the Shell Petroleum Corp., with which he has been connected for a number of years to move to California. He proposes to continue in the oil business in his new location.



Booths 42-43
Oklahoma Bldg.



The G-R Bentube Section is patented and it is our intention to prosecute all infringements. A suit, charging infringement of our patent No. 1,617,083, has been brought in the U. S. District Court at Wilmington, Delaware.

G-R Bentube Sections Shed Scale *Automatically*

THE large masses of scale which completely cover the bottom of this cooling tower pit were *automatically* shed from G-R Bentube Atmospheric Sections. The superintendent of this plant tells us that at no time since the Bentube Sections were installed has it been necessary to resort to mechanical cleaning to remove scale from the sections.

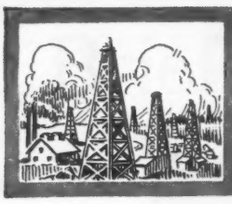
This unique feature of G-R Bentube Sections is due to their exclusive construction of Admiralty Metal tubes set with an initial curvature into cast iron headers. The changes in temperature that occur during normal operation cause expansion and contraction of the tubes, and the corresponding changes in their curvature keep scale from building up to any material thickness.

G-R Bentube Sections serve over 3,000,000 g.p.d.

The Griscom-Russell Co., 285 Madison Ave., New York
Branches in Principal Oil Centers

Griscom-Russell

Heat Transfer Apparatus



REFINERY AND CRUDE PRICES

Quotations on refined products are for interstate or export movement unless otherwise noted.

GASOLINE AND NAPHTHA

	Aug. 5		July 29		July 22	
OKLAHOMA (Group 3)—						
50-52 450 endpoint	.06	.06¼	.06	.06¼	.06	.06¼
56-58 450 endpoint	.05¾	.06¼	.05¾	.06¼	.05¾	.06¼
*58-60 437 endpoint (U. S. Motor)	.0642		.0651		.065	
*60-62 437 endpoint	†.06	.06¼	†.06	.06¼	†.06	.06½
*60-62 400 endpoint	.06932		.07125		†.06⅜	.06½
*64-66 375 endpoint	.0675		†.06⅝	.07	†.06⅝	.06¾
68-70 360 endpoint	.07	.07½	.07	.07½	.07	.07½
64-66 437 endpoint (blend)	.05½	.06	.05½	.06	.05½	.06
NORTH TEXAS—						
50-52 450 endpoint	.05¾	.06	.05¾	.06¼	.05¾	.06¼
58-60 450 endpoint	.05⅝	.05¾	.05¾	.06	.05¾	.06
58-60 437 endpoint (U. S. Motor)	.05⅝	.06	.05¾	.06¼	.05¾	.06¼
60-62 400 endpoint	.05⅞	.06⅛	.06	.06¼	.06	.06¼
64-66 390 endpoint	.06¼	.06½	.06¼	.06½	.06¼	.06½
64-66 375 endpoint	.06⅛	.06¾	.06½	.06¾	.06½	.06¾
68-70 360 endpoint	.06⅞	.07⅛	.06⅞	.07	.06⅞	.07
64-66 437 endpoint (blend)	.05½	.06	.05½	.06	.05½	.06
***NORTH LOUISIANA—**						
58-60 437 endpoint (U. S. Motor)	.06¾	.07	.06¾	.07	.06¾	.07
***ARKANSAS—**						
58-60 437 endpoint (U. S. Motor)	.06¾	.07	.06¾	.07	.06¾	.07
PENNSYLVANIA—						
52-54 Naphtha	.07	.07¼	.07	.07¼	.07	.07¼
54-56 Naphtha	.07¼		.07¼	.07½	.07¼	.07½
58-60 Gasoline	.07¼	.07½	.07½	.07¾	.07¾	.08
60 Gasoline	.07½	.07¾	.07¾	.08	.08	.08¼
62 Gasoline	.08	.08¼	.08	.08¼	.08¼	.08½
64 Gasoline	.08¼	.08½	.08¼	.08½	.08½	.08¾
68-70 350 endpoint gasoline	.08¾	.09	.08¾	.09	.08¾	.09
CALIFORNIA—						
†58-60 437 endpoint (U. S. Motor) domestic	.09½	.10	.09½	.10	.09½	.10
CHICAGO DISTRICT (Based on Group 3)—						
50-52 450 endpoint (Naphtha)	.05¾	.06	.05⅝	.06	.05¾	.06¼
56-58 450 endpoint	.05¾	.06	.05¾	.06⅛	.05¾	.06
58-60 437 endpoint (U. S. Motor)	.05¾	.06½	.05⅞	.06½	.05⅞	.06½
60-62 400 endpoint	.06	.06½	.06	.06½	.06⅛	.06⅜
64-66 375 endpoint	.06¾	.07	.06¾	.07	.06¾	.07
68-70 360 endpoint	.07	.07¼	.07	.07¼	.07⅛	.07⅜
64-66 437 endpoint (blend)	.05½	.06	.05¾	.06	.05¾	.06
GULF COAST (Export)—						
58-60 U. S. Motor	.08		.08		.08	
60-62 400 endpoint	.09		.09		.09	
61-63 390 endpoint	.09¼		.09¼		.09¼	
64-66 375 endpoint	.09½		.09½		.09½	

*Weighted average prices August 4, July 28 and 21 as reported by representative refiners. Sales to jobbers only. †No sales reported. Prices show general market.

*Louisiana, Arkansas, Mississippi and East Texas delivery. †For local consumption.

NATURAL GASOLINE

	Aug. 5		July 29		July 22	
OKLAHOMA (Group 3)—						
Grade A, 72-79.9, 375 e.p., rec. 90%	.05		.04¾		.04½	.04⅝
Grade AA, 80-87.9, 375 e.p., rec. 90%	.05		.04¾		.04½	
Grade B, 76-83.9, 375 e.p., rec. 85%	.04¾		.04½		.04¼	
Grade BB, 84-92, 375 e.p., rec. 85%	.04¾		.04½		.04¼	
Grade C, 80-92, 375 e.p., rec. 78%	.04¾		.04½		.04¼	
NORTH TEXAS—						
Grade A, 72-79.9, 375 e.p., rec. 90%	.05		.04¾		.04½	.04⅝
Grade AA, 80-87.9, 375 e.p., rec. 90%	.05		.04¾		.04½	
Grade B, 76-83.9, 375 e.p., rec. 85%	.04¾		.04½		.04¼	
Grade BB, 84-92, 375 e.p., rec. 85%	.04¾		.04½		.04¼	
Grade C, 80-92, 375 e.p., rec. 78%	.04¾		.04½		.04¼	
NORTH LOUISIANA—						
Grade AA, 80-87, 375 e.p., rec. 90%	.05	.05¼	.05	.05¼	.04¾	.05
Grade BB, 84-92, 375 e.p., rec. 85%	.04¾		.04¾		.04¼	.04½
Grade C, 80-92, 375 e.p., rec. 78%	.04½	.04¾	.04½	.04¾	.04	.04¼
CALIFORNIA—						
75-78, 375-390 endpoint	.07½	.08	.06½	.06¾	.06½	.06¾
CHICAGO DISTRICT (Based on Group 3)—						
Grade A, 72-79.9, 375 e.p., rec. 90%	.05		.04¾		.04½	
Grade AA, 80-87.9, 375 e.p., rec. 90%	.05		.04¾		.04¼	
Grade BB, 84-92, 375 e.p., rec. 85%	.04¾		.04½		.04	

BURNING OIL

	Aug. 5		July 29		July 22	
OKLAHOMA (Group 3)—						
41-43 water white kerosene	.03⅛	.03½	.03¼	.03¾	.03¼	.03¾
42-44 water white kerosene	.03½	.04	.03½	.04	.03½	.04
NORTH TEXAS—						
41-43 water white kerosene	.03	.03¼	.03⅛	.03¼	.03⅛	.03¼
40-41 water white kerosene	.02⅞	.03	.03	.03⅛	.03	.03⅛
***NORTH LOUISIANA—**						
41-43 water white kerosene	.04	.04¼	.04	.04¼	.04	.04¼
***ARKANSAS—**						
41-43 water white kerosene	.04	.04¼	.04¼		.04¼	
PENNSYLVANIA—						
43 Kerosene prime white	.04¼		.04¼		.04¼	
45 Kerosene water white	.04¼	.04½	.04½	.04⅝	.04½	.04⅝
46 Kerosene water white	.04¾	.05	.04¾	.05	.04¾	.05
300 Mineral Seal	.05¾	.06	.05¾	.06	.05¾	.06
CALIFORNIA—						
38-40 water white Kero. (high burning test)	.04	.04½	.04	.04½	.04	.04½
Engine distillate, 43-44, 445 endpoint	.07½	.08	.07	.07½	.07	.07½
Engine distillate, 42-44, 480 endpoint	.06½	.07	.06	.06½	.06	.06½
CHICAGO DISTRICT (Based on Group 3)—						
41-43 water white kerosene	.03⅛	.03⅜	.03¼	.03½	.03¼	.03½
42-44 water white kerosene	.03½	.03¾	.03½	.03¾	.03½	.03¾
GULF COAST (Export)—						
41-43 prime white	.06		.06		.06	
41-43 water white	.07		.07		.07	

*Louisiana, Arkansas, Mississippi and East Texas delivery.

FUEL OIL

	Aug. 5		July 29		July 22	
OKLAHOMA (Group 3)—						
Below 18 Fuel Oil, per bbl.	.45	.50	.45	.50	.45	.50
18-22 Fuel Oil, per bbl.	.47½	.50	.47½	.50	.47½	.50
20-22 Fuel Oil, per bbl.	.50	.57½	.50	.57½	.50	.57½
22-26 Fuel Oil, per bbl.	.55	.60	.55	.60	.55	.60
24-26 Fuel Oil, per bbl.	.60	.65	.60	.65	.60	.65
26-30 Fuel Oil, per bbl.	.70	.75	.70	.75	.70	.75
28-30 Fuel Oil, per bbl.	.77½	.82½	.80	.85	.80	.85
32-36 Gas Oil (industrial)	.02⅛	.02¼	.02⅛	.02¼	.02⅛	.02¼
32-36 Gas Oil (straw color)	.02¼	.02½	.02¼	.02½	.02¼	.02¼
36-38 Distillate	.02⅝	.02¾	.02⅝	.02¾	.02⅝	.02¾
38-40 Straw Distillate	.02¾	.03	.02¾	.03	.02¾	.03
NORTH TEXAS—						
Below 20 Fuel Oil, per bbl.	.40	.50	.40	.50	.40	.50
24-26 Fuel Oil, per bbl.	.60	.65	.60	.65	.60	.65
32-36 Gas Oil (industrial)	.02	.02⅛	.02	.02⅛	.02	.02⅛
38-40 Straw Distillate	.02¾	.03	.02¾	.03	.02¾	.03
***NORTH LOUISIANA—**						
18-20 Fuel Oil, per bbl.	.75	.80	.75	.80	.75	.80
30-32 Gas Oil	.02⅜	.02¾	.02⅜	.02¾	.02⅜	.02¾
***ARKANSAS—**						
33-36 Distillate	.02¾	.03	.02¾	.03	.02¾	.03
30-32 Gas Oil	.02⅜	.02½	.02⅜	.02½	.02⅜	.02½
16-22 Refinery Fuel Oil, per bbl.	.60	.70	.60	.70	.60	.70
GULF COAST (South Texas)—						
Gas Oil	.03¾	.04	.03¾	.04	.03¾	.04
Bunker C Fuel (cargo lots), per bbl.	.75	.80	.75	.80	.75	.80
Bunker C Fuel (small lots)	1.05	1.10	1.05	1.10	1.05	1.10
PENNSYLVANIA—						
30-34 Fuel Oil	.03⅛	.03¼	.03⅛	.03¼	.03⅛	.03¼
36-40 Fuel Oil	.03¼	.03½	.03¼	.03½	.03¼	.03½
CALIFORNIA—						
33-36 Distillate	.02½	.03	.02½	.03	.02½	.03
26-32 Distillate	.01¾	.02	.01¾	.02	.01¾	.02
15-20 Fuel Oil, Bunker (at tidewater)	.65	.75	.65	.75	.65	.75
15-20 Fuel Oil (cargo lots), per bbl.	.60	.70	.60	.70	.60	.70
27 plus Diesel, per bbl.	.80	.90	.80	.90	.80	.90
CHICAGO DISTRICT (Based on Group 3)—						
22-26 Fuel Oil, per bbl.	.57½	.62½	.57½	.62½	.57½	.62½
18-22 Fuel Oil, per bbl.	.47½	.52½	.47½	.52½	.47½	.52½
28-30 Fuel Oil, per bbl. (zero)	.77½	.82½	.77½	.82½	.77½	.82½
32-36 Gas Oil (zero)	.02½	.02⅝	.02⅜	.02½	.02⅜	.02½
32-36 Gas Oil (industrial)	.02⅛	.02¼	.02⅛	.02¼	.02⅛	.02¼
38-40 Straw Distillate	.02¾	.02⅞	.02¾	.03	.02¾	.03

*Louisiana, Arkansas, Mississippi and East Texas delivery.

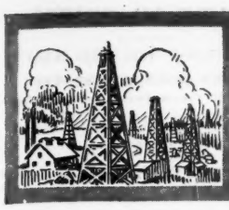
LUBRICATING OIL AND WAX

	Aug. 5		July 29		July 22	
OKLAHOMA (Group 3)—						
100 vis., 2 color, 20-25 cold test	.06	.06½	.06	.06½	.06	.06½
100 vis., 3 color, 20-25 cold test	.05½	.06	.05½	.06	.05½	.06
150 vis., 3 color, 20-25 cold test	.08	.08½	.08	.08½	.08	.08½
150 vis., 4 color, 20-25 cold test	.07½	.08	.07½	.08	.07½	.08
180 vis., 3 color, 23-28 cold test	.09½	.10	.09½	.10	.09½	.10
180 vis., 4 color, 23-28 cold test	.09	.09½	.09	.09½	.09	.09½
180 vis., 5 color, 23-28 cold test	.08½	.09	.08½	.09	.08½	.09
200 vis., 3 color, 23-28 cold test	.11	.11½	.11	.11½	.11	.11½
200 vis., 4 color, 23-28 cold test	.10½	.11	.10½	.11	.10½	.11
200 vis., 5 color, 23-28 cold test	.10	.10½	.10	.10½	.10	.10½
240 vis., 3 color, 25-30 cold test	.14½	.15	.14½	.15	.14½	.15
240 vis., 4 color, 25-30 cold test	.13½	.14	.13½	.14	.13½	.14
240 vis., 5 color, 25-30 cold test	.12½	.13	.12½	.13	.12½	.13
280 vis., 3 color, 25-30 cold test	.16½	.17	.16½	.17	.16½	.17
280 vis., 4 color, 25-30 cold test	.15½	.16	.15½	.16	.15½	.16
280 vis., 5 color, 25-30 cold test	.14½	.15	.14½	.15	.14½	.15
Cylinder Stocks:						
600, steam refined, light green	.08	.11	.08	.11	.08	.11
600, steam refined, dark green	.06	.08	.06	.08	.06	.08
190-200 vis., D color, Bright Stock	.33		.33		.33	
150-160 vis., D color, Bright Stock	.28	.32	.28	.32	.28	.32
*150-160 vis., D color, Bright Stock	.26	.28	.26	.28	.26	.28
150-160 vis., E color, Bright Stock	.24	.26	.24	.26	.24	.26
Waxes:						
124-126 White Crude Scale Wax	.02	.02⅛	.02	.02⅛	.02	.02⅛
PENNSYLVANIA—						
34 Neutral	.05¾	.06½	.05¾	.06½	.05¾	.06½
34 Sundebloom	.05½	.06	.05½	.06	.05¾	.06
36 Miners' Neutral	.05¾	.06	.05¾	.06	.05¾	.06
150, 3 color	.12½	.14	.12½	.14	.12½	.14
180, 3 color	.16	.18	.16	.18	.16	.18
200, 3 color	.18½	.20	.18½	.20	.19	.21
220, 3 color	.23	.23½	.23	.23½	.23	.23½
600, steam refined	.10½	.11	.10½	.11	.10½	.11
635, steam refined	.15½	.17	.15	.17	.14	.17
650, steam refined	.16	.19	.15½	.19	.15½	.19
600, Pennsylvania Flash	.19	.21	.19	.21	.20	.21
630, Pennsylvania Flash	.28	.29	.28	.29	.28	.29
600, E filtered	.16½	.18	.16½	.18	.16½	.18
600, D filtered	.20	.22	.20	.22	.20	.22
Pennsylvania Bright Stocks	.25	.26	.24	.25	.24	.25
*122-124 White Crude Scale Wax	.02¼		.02¼		.02¼	
124-126 White Crude Scale Wax	.02¼		.02¼		.02¼	

*High cold test. All bright stock prices are for domestic movement.

*At New York.

GULF COAST (South Texas)—						
100 vis., 2-2½ color, pale oil	.06½	.06¾	.06½	.06¾	.06½	.06¾
200 vis., 3 color, pale oil	.09½		.09½		.09½	
300 vis., 3 color, pale oil	.10¾		.10¾		.10¾	
500 vis., 3½ color, pale oil	.12	.12¾	.12	.12¾	.12	.12¾
750 vis., 3½ color, pale oil	.13½		.13½		.13½	
1,200 vis., 3½ color, pale oil	.16		.16		.16	



REFINERY AND CRUDE PRICES

Quotations on refined products are for interstate or export movement unless otherwise noted.

2,000 vis., 6 plus color, red oil	.17		.17		.17	
200 vis., 5-6 color, red oil	.08¾	.09	.08¾	.09	.08¾	.09
300 vis., 5-6 color, red oil	.10	.10¼	.10	.10¼	.10	.10¼
500 vis., 5-6 color, red oil	.11¼		.11¼		.11¼	
750 vis., 5-6 color, red oil	.12¾	.13	.12¾	.13	.12¾	.13
1,200 vis., 5-6 color, red oil	.15		.15		.15	
2,000 vis., 4 color, pale oil	.17		.17		.17	
200 vis., 2½ color, filtered oil	.11	.12	.11	.12	.11	.12
300 vis., 2½ color, filtered oil	.12	.13	.12	.13	.12	.13
CALIFORNIA—						
130 vis., 2½-3 color	.10¼	.10½	.10¼	.10½	.10¼	.10½
200 vis., 2½-3 color	.11½	.11¾	.11½	.11¾	.11½	.11¾
300 vis., 3-3½ color	.13	.13½	.13	.13½	.13	.13½
350 vis., 3½-4 color	.13½	.13¾	.13½	.13¾	.13½	.13¾
400 vis., 3½-4 color	.15	.15½	.15	.15½	.15	.15½
Red Neutral:						
200 vis., 4½-5 color	.11	.11¼	.11	.11¼	.11	.11¼
300 vis., 5-6 color	.12	.12¼	.12	.12¼	.12	.12¼
400 vis., 5-6 color	.13¼	.14	.13¼	.14	.13¼	.14
500 vis., 4½-5 color	.15¼	.15½	.15¼	.15½	.15¼	.15½
500 vis., 5-6½ color	.15	.15¼	.15	.15¼	.15	.15¼
600 vis., 6½ plus color	.16	.16¼	.16	.16¼	.16	.16¼

Note—Bright stocks are not manufactured commercially on the Pacific Coast.

NEW YORK (BAYONNE) REFINERY PRICES

	Aug. 5		July 29		July 22	
Gasoline, U. S. Motor, 58-60, 437 e.p.	.08	.10	.08	.10	.08	.10
Kerosene, water white, 41-43	.06¾		.06¾		.07	.07½
*Fuel Oil, Bunker "C," 41-43	1.15		1.15		1.15	
Fuel Oil, Diesel, 28-30, per bbl.	2.00		2.00		2.00	
Gas Oil, 32-36 gravity	.04¾	.05¼	.04¾	.05¼	.04¾	.05¼
25 pale Paraffin Oil, tank car	.10¼		.10¼		.10¼	
28 pale Paraffin Oil, tank car	.07¼		.07¼		.07¼	
280 red Paraffin Oil, tank car	.12½		.12½		.12½	
250 red Paraffin Oil, tank car	.11½		.11½		.11½	
225 red Paraffin Oil, tank car	.10		.10		.10	
200 red Paraffin Oil, tank car	.09¼		.09¼		.09¼	
Refined Wax:						
120-122 a.m.p., per lb.	.03		.03		.02⅞	
125-127 a.m.p., per lb.	.03¼		.03¼		.03¼	
130-132 a.m.p., per lb.	.03½		.03½		.03½	
133-135 a.m.p., per lb.	.04½		.04½		.04½	
135-137 a.m.p., per lb.	.04⅝		.04⅝		.04⅝	
Petrolatum in barrels, in carload lots, per pound:						
Dark Green	.01¾		.01¾		.01¾	
Amber	.03¼		.03¼		.03¼	
Extra Amber	.03⅜		.03⅜		.03⅜	
Cream	.06		.06		.06	
Lily White	.06¾		.06¾		.06¼	
Snow White	.08		.08		.08	

*Lighterage 5.0 cents a barrel extra.

NEW YORK (BAYONNE) EXPORT PRICES

	Aug. 5		July 29		July 22	
Kerosene, prime white	.07¾		.07¾		.07¾	
Kerosene, water white	.09		.09		.09	
600, steam refined cylinder stocks, in bbls.	.18½	.19	.18½	.19	.18	.19
635, steam refined	.20½	.21	.20½	.21	.20	.21
650, steam refined	.24½	.25	.24½	.25	.24	.25
600, Pennsylvania Flash	.28		.28		.29	
630, Pennsylvania Flash	.31		.31		.32	
600, Warren E	.26		.26		.26	
600, Oil City E	.25		.25		.25	
Light 140-150 Bright Stocks	.33		.33		.32	
Dark 140-150 Bright Stocks	.31		.31		.30	

LOS ANGELES EXPORT PRICES

	Aug. 2		July 29		July 22	
Kerosene, water white	.03¾	.04½	.03¾	.04½	.03¾	.04½
*U. S. Motor Gasoline, 53-55, 437 e.p.	.06½	.06¾	.06½	.06¾	.06½	.06¾

*Prices on coastwise shipments.

CRUDE OIL PRICES

OKLAHOMA, KANSAS, NORTH AND EAST CENTRAL TEXAS

Oklahoma City—Same as other Mid-Continent price schedule except Empire Pipe Line Co. posted all oil 40 gravity and above at $1.43 on April 10.

Corsicana heavy (April 10, 1930).....$ .80

Other fields.....See gravity table

*Posted by Magnolia Petroleum Co.

TEXAS PANHANDLE

Gray County, Wheeler County and Carson-Hutchinson Counties—See gravity table.

In Noel-McConnell district Prairie Oil & Gas Co. posted April 10, below 30 degrees, 75½ cents, with 5-cent differential upward to 34-34.9, $1.00½, and then a 3-cent differential upward to 44 and above at $1.35½.

WEST TEXAS

Iatan*.....Same as North Texas

Crane-Upton-Crockett, Pecos, Winkler, Mitchell and Ector.....See gravity table, Column 3

Howard and Glasscock.....See gravity table, Column 9

Chalk† (April 10, 1930).....$ .75

*Includes Westbrook Field. †Posted by Humble Oil & Refining Co.

ARKANSAS-NORTH LOUISIANA

Smackover, below 24 gravity (April 11, 1930).....$ .90

Smackover, 24 gravity and above (April 11, 1930).....1.05

Carterville, Sarepta and Cotton Valley, below 36 gravity (April 11, 1930).....85

Bellevue (April 11, 1930).....1.15

Urania (April 11, 1930).....95

East El Dorado (April 11, 1930).....90

Other fields.....See gravity table

Cotton Valley crude above 36 gravity takes same gravity price schedule as shown for North Louisiana and Arkansas crude in Mid-Continent gravity price table.

Note—Smackover, Cotton Valley and Bellevue posted by Standard Oil Co. of Louisiana and Magnolia Petroleum Co.; Urania posted by Louisiana Oil Refining Corp.; East El Dorado posted by Magnolia Petroleum Co.

Grade A (April 10, 1930)*.....$1.15

Grade B, 25 degrees and upward.....See gravity table

Jennings, La. (April 10, 1930)†.....1.10

Refugio (light).....Same as Grade B

Refugio (heavy) (April 10, 1930)‖.....85

Sorrento (April 10, 1930)‡.....1.10

Markham (April 10, 1930)§.....85

High Island (April 10, 1930)¶.....95

*Humble Oil & Refining Co. †Gulf Pipe Line Co. ‡Sun Pipe Line Co. §The Texas Pipe Line Co. ¶Posted by Gulf Pipe Line Co. ‖Humble Oil & Refining Co. and Gulf Coast Pipe Line Co.

(Continued on Page 146)

CRUDE OIL GRAVITY TABLE

Gravity—	1 Okla.-Kans.	2 N. C. Texas, No. La., Arkansas	3 Crane, Upton, Ector, Crockett, Winkler, Pecos, Mitchell, (West Texas). Lea, N. Mex.	4 Wheeler County (Texas Panhandle)	5 Gray County (Texas Panhandle)	6 Carson and Hutchinson (Texas Panhandle)	7 Salt Creek, Wyo.	8 Stephens, Ark.	9 Howard-Glasscock (West Texas)	10 Grade B Gulf Coast and Refugio, Texas
Below 25	.75	.72	.65	....	....	....	....	....	.65	1.00
25 to 25.9	.80	.77	.68	....	....	....	....	....	.68	1.03
26 to 26.9	.85	.82	.71	....	....	....	....	....	.71	1.06
27 to 27.9	.90	.87	.74	....	....	....	....	.76	.74	1.09
28 to 28.9	.95	.92	.77	....	.75½	....	....	.81	.76	1.12
29 to 29.9	1.00	.97	.80	.75½	.80½	....	1.00	.96	.78	1.15
30 to 30.9	1.05	1.02	.83	.80½	.85½	....	1.05	.91	.80	1.18
31 to 31.9	1.10	1.07	.86	.85½	.90½	.77½	1.10	.96	.82	1.21
32 to 32.9	1.15	1.12	.89	.90½	.95½	.82½	1.15	1.01	.84	1.24
33 to 33.9	1.18½	1.17	.92	.95½	1.00½	.87½	1.18½	....	.86	1.27
34 to 34.9	1.22	1.22	.95	1.00½	1.05½	.92½	1.22	....	.88	1.30
35 to 35.9	1.25½	1.26½	.98	1.04	1.09	.96	1.25½	....	.90	1.33
36 to 36.9	1.29	1.29	1.01	1.07½	1.12½	.99½	1.29	....	.92	1.36
37 to 37.9	1.32½	1.32½	....	1.11	1.16	1.03	1.32½	....	....	1.39
38 to 38.9	1.36	1.36	....	1.14½	1.19½	1.06½	....	....	....	1.42
39 to 39.9	1.39½	1.39½	....	1.18	1.23	1.10	....	....	....	1.44
40 to 40.9	1.43	1.43	....	1.21½	1.26½	1.13½	....	....	....	1.46
41 to 41.9	1.46½	1.46½	....	1.25	1.30	1.17	....	....	....	1.48
42 to 42.9	1.50	1.50	....	1.28½	1.33½	1.20½	....	....	....	1.50
43 to 43.9	1.53½	1.53½	....	1.32	1.37	1.24	....	....	....	1.52
44 and above	1.57	1.57	....	1.35½	1.40½	1.27½	....	....	....	1.54

Column 1, Note—Above prices posted April 10, 1930, by Carter Oil Co. (beginning at 25° and below), and by the Prairie Oil & Gas Co. and other purchasers beginning at 24° and below, the Magnolia Petroleum alone excepted. The Magnolia on April 10 posted the following prices: Below 26 gravity, 70 cents; 26-26.9, 76 cents; 27-27.9, 82 cents; 28-28.9, 88 cents; 29-29.9, 95 cents; 30-30.9, $1.02. From 31 and up and including 44° and above Magnolia followed Carter price schedule, but made its whole schedule apply to its gravity purchases in Kansas, Oklahoma and North Central Texas alike.

Column 2—Humble Oil & Refining Co. posted above prices April 10, 1930, and was followed by all other companies in Texas except Magnolia which posted a different price schedule than Humble up to 33.9° (see note in paragraph just above). The Texas Company posted North Louisiana and Arkansas on April 10, and Standard of Louisiana posted on April 11, followed by other companies, but Magnolia's price schedule begins with below 28 gravity at 87 cents. North Central Texas includes North Texas, Ranger, Mexia, Powell, Richland, Wortham, Lytton Springs, Currie, Nocona, Moran and Corsicana light. Arkansas and Louisiana pools include Caddo, Bull Bayou, Crichton, Cotton Valley (above 36 gravity), DeSoto, Haynesville, Homer, El Dorado and Rainbow.

Column 3—Posted by Humble Oil & Refining Co. April 10, 1930, and Magnolia Petroleum Co. April 10, 1930.

Columns 4, 5 and 6—Humble Oil & Refining Co., Prairie Oil & Gas Co., Magnolia Petroleum Co., April 10, 1930.

Column 7—Mid-West Refining Co. April 11. All crude over 37 gravity $1.32½.

Column 8—Louisiana Oil & Refining Co., April 11.

Column 10—Humble Oil & Refining Co., April 10. Magnolia Petroleum Co. posted below 25 gravity, 65 cents, with 3-cent differential upward to and including 36 and above which was posted at $1.01.

CALIFORNIA CRUDE OIL PRICES

Standard Oil Co.-Union Oil Co. (Effective March 11, 1930)

Gravity—	1 Seal Beach, Salt Lake, Newport, Summerland, Lawndale, Los Angeles, Fullerton, Richfield, Torrance, Olinda-Brea, Alamitos Heights, Huntington Beach, Signal Hill, Inglewood	2 Whittier, La Habra, Coyote Hills	3 Midway-Sunset, Elk Hills, Lost Hills, Belridge, Buena Vista Hills	4 Montebello	5 Santa Fe Springs (June 14, 1930)	6 Santa Maria, Coalinga	7 Wheeler Ridge, Fruitvale	8 Orcutt, Ventura, Rincon	9 Ventura Avenue (Nov. 8)	10 Elwood Terrace	11 Athens, Rosecrans, Dominguez
14 to 14.9	.70	.70	.55	.70	....	.55	.55	.55	.70	....	....
15 to 15.9	.70	.70	.55	.70	....	.55	.55	.55	.70	....	....
16 to 16.9	.70	.70	.55	.70	....	.55	.55	.55	.70	....	....
17 to 17.9	.70	.70	.55	.70	....	.55	.55	.55	.70	....	....
18 to 18.9	.76	.76	.62	.71	....	.62	.62	.65	.76	....	....
19 to 19.9	.82	.82	.70	.77	....	.70	.70	.70	.82	....	....
20 to 20.9	.88	.87	.78	.83	....	.78	.78	.78	.88	....	....
21 to 21.9	.94	.93	.86	.90	.92	.86	.86	.90	.91	....	....
22 to 22.9	1.00	.98	.94	.97	.95	.94	.94	.95	.94	....	....
23 to 23.9	1.07	....	1.02	1.05	1.01	1.02	1.02	1.02	1.00	....	....
24 to 24.9	1.14	....	1.09	1.11	1.07	1.07	1.07	1.10	1.07	....	1.14
25 to 25.9	1.21	....	1.16	1.17	1.13	1.12	1.12	1.18	1.14	....	1.19
26 to 26.9	1.28	....	1.23	1.23	1.19	1.17	1.17	1.26	1.21	....	1.24
27 to 27.9	1.35	....	1.30	1.29	1.25	1.23	1.22	....	1.28	....	1.29
28 to 28.9	1.42	....	1.35	1.35	1.31	1.27	....	....	1.35	....	1.34
29 to 29.9	1.46	....	1.41	1.38	1.37	1.31	....	....	1.39	....	1.39
30 to 30.9	1.50	....	1.47	1.41	1.43	1.35	....	....	1.43	....	1.45
31 to 31.9	1.55	....	1.53	....	1.49	1.39	....	....	1.48	....	1.51
32 to 32.9	1.60	....	1.59	....	1.55	1.43	....	....	1.53	....	1.57
33 to 33.9	1.65	....	1.65	....	1.60	1.47	....	....	1.59	....	1.64
34 to 34.9	1.70	....	....	....	1.65	1.51	....	....	1.65	1.32	1.71
35 to 35.9	1.75	....	....	....	1.70	1.55	....	....	1.71	1.39	1.78
36 to 36.9	1.80	....	....	....	1.75	....	....	....	....	1.46	1.84
37 to 37.9	1.85	....	....	....	1.80	....	....	....	....	1.53	1.90
38 to 38.9	1.90	....	....	....	1.85	....	....	....	....	1.60	1.96
39 to 39.9	....	....	....	....	1.90	....	....	....	....	1.66	2.02
40 to 40.9	....	....	....	....	....	....	....	....	....	1.72	2.08
41 to 41.9	....	....	....	....	....	....	....	....	....	1.78	2.14
42 to 42.9	....	....	....	....	....	....	....	....	....	1.84	2.20

Kern River, Newhall-McKittrick, Mount Poso and Round Mountain, 11 to 13.9 gravity, 50 cents; 14 gravity and above 55 cents, effective March 11. On March 11, the Union Oil Co. posted Midway-Sunset, Elk Hills, Buena Vista, Lost Hills and Coalinga crude as follows: 11 to 13.9 gravity at 50 cents.

Column 1—Signal Hill, Seal Beach, Huntington Beach and Alamitos Heights crude, 14 to 32.9 gravity, inclusive; Richfield, Olinda-Brea and Fullerton, 14 to 30.9 gravity; Torrance and Inglewood, 14 to 28.9 gravity.

Column 2—Whittier crude, 14 to 22.9 gravity; Coyote Hills, 14 to 30.9 gravity.

Column 3—Kern River, Newhall and McKittrick, 11 to 13.9 gravity; Midway-Sunset, Buena Vista and Elk Hills, 11 to 33.9 gravity; Lost Hills, 11 to 34.9 gravity; oil below 14 gravity posted at 50 cents.

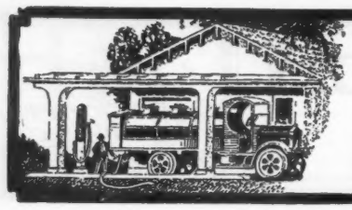
Column 5—Price change posted by Standard of California June 14.

Column 6—Oil below 14 gravity posted at 45 cents.

Columns 8 and 9—Posted by Union Oil Co. only.

Column 10—Standard posted price f.o.b. tanker.

Kettleman Hills, 55 gravity and above, $1.65 (posted by Standard Oil Co. of California).



TANK WAGON MARKETS

Tank wagon quotations for gasoline and kerosene in United States as furnished by the larger marketing concerns August 5

ALL TANK WAGON AND SERVICE STATION QUOTATIONS INCLUDE TAXES

STANDARD OIL CO. (INDIANA)

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax	tank of wagon
Chicago†	18.0	19.0	3.0	13.0
Decatur, Ill.	18.2	19.2	3.0	13.1
E. St. Louis	17.4	18.4	3.0	12.2
Joliet	18.4	19.4	3.0	13.3
Peoria	18.2	19.2	3.0	13.1
Quincy	18.2	19.2	3.0	12.9
Davenport, Ia.	18.5	19.5	3.0	13.3
Des Moines	18.5	19.5	3.0	13.3
Keokuk	18.5	19.5	3.0	13.3
Sioux City	18.1	19.1	3.0	12.9
Duluth, Minn.	19.5	20.5	3.0	13.9
Mankato	19.1	20.1	3.0	13.7
Minneapolis	19.2	20.2	3.0	13.9
LaCrosse, Wis.	18.2	19.2	3.0	14.0
Milwaukee	17.1	18.1	3.0	12.9
Madison	17.3	18.3	3.0	13.1
Detroit, Mich.	18.8	19.8	3.0	14.7
Grand Rapids	18.7	19.7	3.0	14.6
Saginaw	18.9	19.9	3.0	14.8
Evansville, Ind.	19.0	20.0	4.0	14.0
Fort Wayne	19.4	20.4	4.0	14.4
Indianapolis	19.2	20.2	4.0	14.2
South Bend	19.4	20.4	4.0	14.4
Fargo, N. D.	20.9	21.9	3.0	15.9
Huron, S. D.	20.3	21.3	4.0	14.7
Sioux Falls	19.1	20.1	4.0	14.4
K. C., Mo.*	17.9	18.9	3.0	11.6
Springfield*	17.8	18.8	3.0	12.5
St. Louis*	16.9	17.9	2.5	12.3
St. Joseph	17.5	18.6	2.0	12.2
Wichita, Kans.	16.8	15.8	3.0	11.8
Bartlesville, Ok.	17.5	20.5	4.0	11.5

*State tax 2 cents; remainder city tax.

†Effective June 3, discounts on Q.D.A. in Chicago district 4 cents off service station price on purchases of 500 gallons or more per month and 5 cents on purchases of 1,000 gallons or more per month.

The following quantity discounts from the service station price are allowed on monthly sales of gasoline; 2,000 gallons or less, 2 cents; more than 2,000 and less than 6,000 gallons, 2½ cents; more than 6,000 gallons, 3 cents; 75,000 gallons or more, 4½ cents. Discounts are allowed each month and they are not cumulative. Delivery tickets showing date and quantity delivered must be sent to the seller before the tenth of the month to secure the discount on the previous month's purchases.

NAPHTHA

	Tank wagon	Tank car
Oleum spirits	14.7	10.0
V. M. & P. naphtha	16.7	12.0
Cleaner's naphtha	17.0	14.9
Stanisol	17.0	16.4

Tank wagon prices f.o.b. Chicago; tank car prices f.o.b. Whiting.

STANOLIND FURNACE OIL IN CHICAGO

Less than 100 gallons	9.0
100 to 349 gallons	8.0
350 gallons or more	7.5

Note—Outside Chicago furnace oil discount of 1 cent per gallon is given on deliveries of 100 to 349 gallons and 1½ cents on deliveries of 350 gallons or more.

SOUTHWESTERN DISTRICT

Magnolia Petroleum Co.

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax	tank of wagon
Dallas, Tex.	14.0	15.0	4.0	12.0
Fort Worth	14.0	17.0	4.0	11.0
Houston	15.0	19.0	4.0	11.0
San Antonio	13.0	17.0	4.0	11.0
El Paso	16.0	20.0	4.0	13.0
Texarkana	14.0	15.0	4.0	12.0
Muskogee*	16.0	19.0	4.0	9.0
Okla. City*	15.0	18.0	4.0	10.0
Tulsa*	16.0	20.0	4.0	10.0
Ft. Smith, Ark.	14.0	15.0	5.0	12.0
Little Rock	17.0	17.0	5.0	13.0

*Gasoline tank wagon price to dealers 2 cents under posted tank wagon.

ROCKY MOUNTAIN DISTRICT

Continental Oil Co.

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax	tank of wagon
Denver, Colo.	16.0	19.0	4.0	15.5
Pueblo	17.0	20.0	4.0	15.5
Grand Junction	21.5	24.5	4.0	19.0
Casper, Wyo.	19.0	22.0	4.0	14.0
Cheyenne	20.5	23.5	4.0	15.5
Butte, Mont.	24.5	23.0	5.0	20.0
Billings	24.5	27.5	5.0	18.5
Great Falls	24.5	27.5	5.0	20.0
Helena	24.5	27.5	5.0	20.0
Salt Lake, Utah	20.0	23.0	3.5	17.0
Albu'que, N. M.	16.0	20.0	5.0	15.0
Boise, Idaho	23.5	26.5	5.0	19.0
Twin Falls	23.5	27.5	5.0	19.0

PENNSYLVANIA—DELAWARE AND PART NEW ENGLAND

The Atlantic Refining Co.

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax	tank of wagon
Pittsburgh, Pa.	16 0	*21.0	...	13.0
Philadelphia	16.0	*21.0	...	13.0
Scranton	16 0	*21.0	...	13.0
Allentown	16 0	*21 0	...	13 0
Altoona	16.0	*21.0	...	13.0
Erie	15.0	*19.0	...	12.0
Dover, Del.	19.0	21.0	3.0	13.0
Wilmington	19.0	21.0	3.0	13.0
Springf'd, Mass.	17.5	19.5	2.0	12 5
Worcester	17.3	19.3	2.0	12.3
Boston	16.5	18.5	2.0	11.5
Providence, R.I.	16.7	18.7	2.0	11.7
Hartford, Conn.	17.5	19.5	2.0	12.5
New Haven	17.6	19.6	2.0	12.6

*Includes tax of 3 cents. Pennsylvania tax is collected by the dealer and paid by him direct to the State. The Atlantic Refining Co. recognizes a 2-cent per gallon discount on gasoline from its posted tank wagon markets on sales to dealers for purposes of resale. The Atlantic Refining Co. also recognizes a maximum discount of 2 cents per gallon on gasoline to commercial accounts under contract for one year.

NEW YORK AND PART OF NEW ENGLAND DISTRICT

Standard Oil Co. (New York)

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax	tank of wagon
Albany, N. Y.	17.6	19.6	2.0	15.6
New York*	16.3	18.3	2.0	14.3
Buffalo	17.8	19.8	2.0	14.8
Rochester	18.0	20.0	2.0	14.0
Syracuse	18.8	20.8	2.0	14.8
Boston, Mass.	16.5	18.5	2.0	13.5
Augusta, Me.	19.8	21.8	4.0	14.8
Manch't'r, N. H.	19.4	21.4	4.0	14.0
Burlington, Vt.	19.6	21.6	4.0	15.2

*Prices in steel barrels.

SOUTHERN DISTRICT

Standard Oil Co. (Kentucky)

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax	tank of wagon
Atlanta, Ga.	19.0	21.0	6.0	14.5
Augusta	22.0	24.0	6.0	15.5
Macon	20.0	22.0	6.0	14.0
Savannah	20.0	22.0	6.0	14.0
Birm'ham, Ala.	18.0	20.0	5.0	14.5
Mobile	18.0	18.0	4.0	13.5
Montgomery	19.0	21.0	4.0	15.0
Clarks'le, Miss.	19.0	21.0	5.0	12.5
Jackson	17.0	19.0	5.0	13.0
Natchez	19.0	21.0	5.0	13.0
Gulfport	20.5	22.5	5.0	13.0
Vicksburg	19.0	21.0	5.0	13.0
Jack'ville, Fla.	19.0	21.0	6.0	14.0
Miami	21.0	23.0	6.0	14.0
Pensacola	19.0	19.0	6.0	13.5
Tampa	20.0	22.0	5.0	13.0
Lexington, Ky.	19.0	20.0	5.0	14.5
Covington	21.0	22.0	5.0	14.5
Louisville	18.0	20.0	5.0	13.0
Ashland	19.0	21.0	5.0	15.0
Catlettsburg	19.0	21.0	5.0	15.0

In addition to the state tax of 4 cents on gasoline, Montgomery has city tax of 1 cent on gasoline and one-half cent on kerosene. Kerosene prices in Georgia include 1-cent tax. In Florida, an inspection fee of 0.125 cent; in Alabama, an inspection fee of one-half cent on kerosene and one-fourth cent on gasoline. To Pensacola, Birmingham and Mobile state taxes add 1-cent levy tax. To Gulfport state tax add privilege tax of 2 cents.

Effective April 2, price to dealers 2 cents under posted tank wagon price.

ATLANTIC COAST DISTRICT

Standard Oil Co. (New Jersey)

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax	tank of wagon
Atlantic City	16.5	18.5	2.0	13.5
Newark, N. J.	15.5	17.5	2.0	12.5
Annapolis	18.0	20.0	4.0	13.0
Baltimore	17.2	19.2	4.0	10.5
Cumberland	19.0	21.0	4.0	14.0
Wash'gton, D.C.	15.7	17.7	2.0	12.7
Danville, Va.	19.8	21.8	5.0	13.8
Norfolk	18.3	20.3	5.0	11.0
Petersburg	19.3	21.3	5.0	13.3
Roanoke	19.0	20.0	5.0	14.0
Richmond	16.7	18.7	5.0	12.7
Charles'n, W.Va.	18.5	20.5	4.0	12.5
Keyser	19.1	21.1	4.0	14.1
Parkersburg	17.2	19.2	4.0	11.2
Wheeling	18.4	20.4	4.0	12.4
Charlotte, N. C.	20.3	20.3	5.0	14.3
Hickory	20.6	22.6	5.0	14.6
Mt. Airy	20.5	22.5	5.0	14.5
Salisbury	20.5	20.5	5.0	14.5
Charleston, S. C.	19.3	21.3	6.0	12.3
Columbia	21.2	23.2	6.0	14.2

A 2-cent per gallon discount off the gasoline tank wagon price is offered to dealers.

PACIFIC COAST TERRITORY

Standard Oil Co. (California)

	Gasoline			Kero.
	Wholesale price	Retail price	Incl'ds tax	tank of wagon
Fresno	19.0	17.0	3.0	17 0
San Francisco	19.0	12.0	3.0	15.5
Los Angeles	18.5	16.5	3.0	15.5
Reno, Nev.	24.0	22.0	4.0	19.0
Portland, Ore.	20.5	18 5	4.0	16.5
Seattle, Wash.	19.5	12.5	3.0	16.5
Tacoma	19.5	17.5	3.0	16.5
Spokane	21.5	21.5	3.0	20.5
Phoenix, Ariz.	17.0	20.0	4.0	20.0

Above prices are at company's plant or depots as company does not operate stations. A 6-cent per gallon discount is given dealers and customers taking tank wagon lots except in Phoenix where discount is 1 cent.

NEBRASKA

Standard Oil Co. (Nebraska)

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax	tank of wagon
Omaha	19.25	19.25	4.0	13.25
McCook	20 75	22.75	4.0	14.75
Norfolk	19.75	21.75	4.0	13 75
N. Platte	20.75	22.75	4.0	14.50
Scottsbluff	17.00	17.00	4.0	14.25

OHIO

Standard Oil Co. (Ohio)

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax	tank of wagon
Ohio points*	20.0	21.0	4.0	†14.0

*Dealers and commercial accounts 2 cents under tank wagon.

†Service station price 16 cents.

CENTRAL SOUTH DISTRICT

Standard Oil Co. (Louisiana)

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax	tank of wagon
N. Orleans, La.*	14.5	14.5	5.0	12.0
Baton Rouge	15.5	16.0	4.0	14.0
Alexandria†	17.5	18.0	5.0	13.0
Lafayette*	17.5	18.0	5.0	13.0
Lake Charles*	17.5	18.0	5.0	13.0
Shreveport	15.5	17.5	4.0	13.0
Knoxv'le, Tenn	19.5	20.0	5.0	15.0
Memphis	17.5	19.5	5.0	12.5
Chattanooga	19.5	20.0	5.0	13.0
Nashville	18.5	19.0	5.0	15.0
Bristol	19.5	21.5	5.0	14.0
Lt. Rock, Ark.	17.0	17.0	5.0	13.0

*Includes city tax of 1 cent. Louisiana kerosene prices include 1-cent state tax. New Orleans kerosene price also includes 1-cent city tax.

†Gasoline price at Alexandria includes 1-cent tax in parish of Rapides.

TANK WAGON CHANGES

Standard Oil Co. of Nebraska effective July 5 reduced gasoline tank wagon and service station prices to 17 cents at Scottsbluff, Nebr. Effective July 29, same company reduced gasoline service station price to 19¼ cents at Omaha, Nebr.

Standard Oil Co. of Kentucky, effective July 17, reduced kerosene tank wagon prices 1 cent at Atlanta, Ga. Same company reduced gasoline tank wagon price from 19 to 17 cents at Jackson, Miss, effective July 17.

Standard Oil Co. of Louisiana reduced gasoline tank wagon price 1½ cents at Knoxville, Tenn., effective July 30.

Standard Oil Co. of Kentucky effective July 25 reduced gasoline service station price 2 cents at Jackson, Miss. Same company effective July 30 reduced gasoline tank wagon price 1 cent at Jacksonville, Fla.

SEATTLE MEN ORGANIZE

SEATTLE, Wash., Aug. 4.—The Northwest Oil and Gas Association has been formed here with Col. William T. Perkins, president of the North Coast Bank, as temporary head.

CRUDE OIL PRICES

(Continued from Page 145)

ROCKY MOUNTAIN STATES

Ohio Oil Co.-Midwest Refining Co.

(Effective April 11, 1930)

lles (Feb. 15, 1930):	
33 gravity and above	$ .87
Under 33 gravity	.66
Dutton Creek (Feb. 15, 1930)	1.25
Rock Creek, Wyo.	1.35
Salt Creek	See gravity table
Big Muddy	1.38
Grass Creek, heavy (July 27, 1928)	.90
Grass Creek, light	1.55
Mule Creek (May 21, 1929)	1.20
Elk Basin	1.55
Lance Creek	1.63
Poison Spider (March 14, 1927)	1.00
Notches (March 14, 1927)	.65
Rex Lake (February 22)	1.10
Osage	1.63
Lost Soldier (contract, May 22)	1.90
Hamilton Dome (March 14, 1927)	.85
Greybull (April 11, 1930)	1.55
Four Bear (May 21, 1929)	.85
Cat Creek	1.55
Pondera (Montana) (April 10, 1930)	1.55
Sunburst (Montana) (Feb. 15, 1930)	1.55
Hogback (Feb. 15, 1930)	1.40
Artesia (New Mexico)	1.05
Lea County	See gravity table

Note—Salt Creek, Osage, Cat Creek, Greybull and Hogback posted by Midwest Refining Co., and the remainder by the Ohio Oil Co. Both companies posted Grass Creek light and Elk Basin.

SOUTH CENTRAL AND SOUTHWEST TEXAS

Darst Creek (April 10, 1930)*	$1.15
Luling (April 10, 1930)	.85
Mirando (April 10, 1930)†	.85
Pettus (April 10, 1930)§	1.40
Salt Flat (April 10, 1930)§	1.15
Thrall‡	...
Lytton Springs (Lockhart)	See gravity table
Somerset (April 10, 1930):	
Below 33 gravity	$1.16
33 to 33.9 gravity	1.17
34 to 34.9 gravity	1.19
35 to 35.9 gravity	1.21
36 to 36.9 gravity	1.23
37 to 37.9 gravity	1.25
38 gravity and above	1.27

*Posted by Humble Oil & Refining Co. and Magnolia Petroleum Co. †Magnolia Petroleum Co., Humble Oil & Refining Co., Crown Central Pipe Line Co. ‡Thrall prices same as North Central Texas less 19½ cents per cwt. freight. §Humble Oil & Refining Co.

EASTERN STATES

Joseph Seep Purchasing Agency

(Effective July 11, 1930)

Seep Purchasing Agency withdrew from Bradford and Allegany Fields as a purchaser on May 16.

Penna Grade Oil in National Transit Lines (Pennsylvania)	$2.05
Penna Grade Oil in Southwest Pennsylvania Lines (Pennsylvania)	2.00
Penna Grade Oil in Eureka Pipe Line Lines (West Virginia)	1.90
Penna Grade Oil in Buckeye Pipe Line Lines (Ohio)	1.75
Corning 25-cent Grade Oil in Buckeye Pipe Line Co.'s Lines (May 2, 1930)	1.75
Somerset Oil in Eureka Pipe Line Lines (Kentucky) (April 11, 1930)	1.31
Somerset Oil in Cumberland Pipe Line Lines (Kentucky) (April 11, 1930)	1.47
Ragland Grade Oil in Cumberland Pipe Line Lines (Kentucky) (Jan. 29)	.60
Wayne District Oil in Cumberland Pipe Lines (April 11, 1930)	1.34
Tide Water Pipe Co.	
Bradford district (July 11)	$2.10
Allegany district (July 11)	2.10
Pure Oil Co.	
Cabin Creek, W. Va. (July 11)	$2.15
Kelly Creek, W. Va. (July 11)	2.00
Bradford Hollow (July 11)	2.00

MIDDLE WESTERN STATES

Ohio Oil Co.

(Effective April 11, 1930)

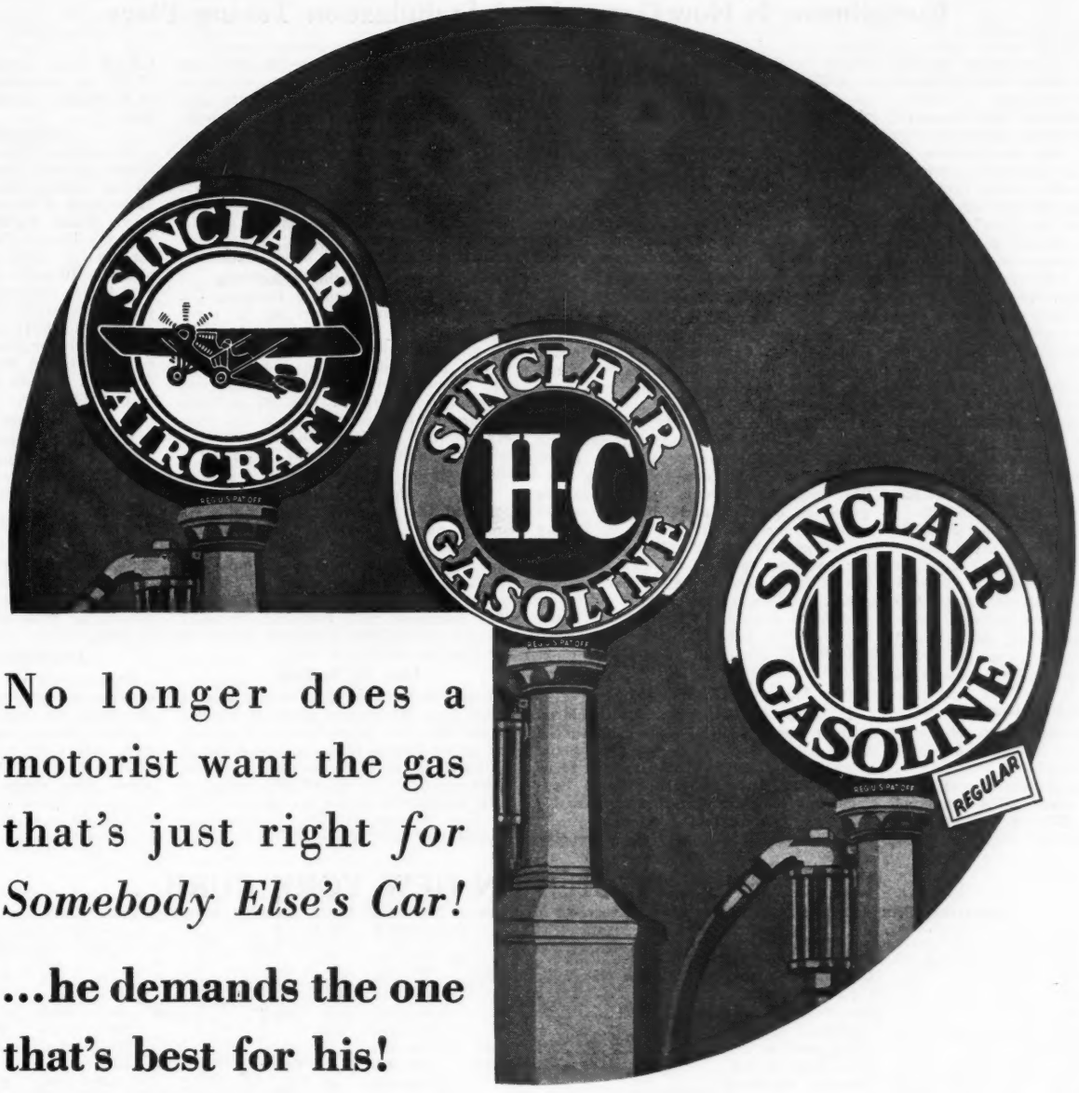
Lima (June 26, 1930)	$1.55
Wooster (June 26, 1930)	1.70
Illinois	1.65
Indiana (June 26, 1930)	1.32
Princeton	1.65
Plymouth	1.25
Western Kentucky	1.55
Midland, Mich.* (July 19)	1.45
Dundee, Mich. (April 16)‖	
Same as Mid-Continent gravity scale	
Upper and Lower Traverse sands, Mich. (April 16)‖	
Same as Mid-Continent gravity scale	
Saginaw, Mich. (April 11)†	
Same as Mid-Continent gravity scale	
Cumberland, Clay, Barren, Clinton and Monroe Counties, Kentucky (March 15)‡	1.50
Oil City, Ky. (July 25, 1930)§	1.35
Oil Springs (Canada) (June 28, 1930)¶	2.02
Petrolia (Canada) (June 23, 1930)¶	1.95

*Posted by Pure Oil Co. †Posted by Sun Oil Co. ‡Posted by Paragon Development Co. §Posted by Stoll Oil Refining Co. ¶Posted by Imperial Oil Co., Ltd. ‖Posted by Standard of Indiana for boat shipment. Local refiners posted Mid-Continent prices on April 11.

MEXICAN CRUDE

Panuco*	$0.60

*F.o.b. ship, based on May transactions.



No longer does a motorist want the gas that's just right *for Somebody Else's Car!*

...he demands the one that's best for his!

Here's a way to build gallonage in your community!

In these days of changing engines and changing motoring conditions—no one kind of gasoline today can satisfy every motorist. It takes *three* different gasolines to do the job!

And now you can offer motorists their choice of those three gasolines, to get the gasoline that is exactly right for *their own engines*, and their own needs.

Here, in Sinclair Three-Gas Service, you can offer *Aircraft* Gasoline, the *Ace* of high test gasolines—if a motorist wants quick getaway and flashy, brilliant road-performance. Sinclair Aircraft is the Ace of high test gasolines because it is specially manufactured at Sinclair Refineries, meeting the requirements of the Federal Specifications Board for Aviation Gasoline—domestic grade—and gives sustained power. Due to its careful fractionation it is free from dissolved gases which cause gas locks, uneven distribution, galloping and engine balk.

Or, if he wants high compression performance—if the engine knocks now and then—recommend Sinclair *H-C* Gasoline. H-C stops knocks. It's *all* gasoline—nothing added.

Thirdly—if he prefers to pay three cents less per gallon but wants a gas that's full of eager power and full of economical mileage—sell Sinclair *Regular* Gasoline! The quality gasoline at a popular price.

Three different gasolines! Sinclair Dealers who offer this Three-Gas Service make satisfied customers.

SINCLAIR REFINING COMPANY. INC. 45 Nassau Street, New York—*Atlanta, Chicago, Houston, Kansas City*

SINCLAIR THREE-GAS SERVICE

Improved Conditions in Industry Seen

President Reeser in Report to Barnsdall Stockholders Says Curtailment Is Now General and Stabilization Taking Place

The curtailment movement has become general throughout the oil fields of America, with brightened prospects as a result, E. B. Reeser, president of the Barnsdall Corp. and president of the American Petroleum Institute, tells stockholders of the company in the semiannual report. "The production in the United States is, at this time at least 400,000 bbls. a day less than it was one year ago," says Mr. Reeser. "The Barnsdall Corp. is co-operating with other companies in bringing about this drastic reduction in production. The petroleum industry is being stabilized, insuring more satisfactory conditions in the near future."

The report of Barnsdall Corp. and subsidiaries for the six months ended June 30, 1930, shows net income of $3,367,440 after interest, federal taxes, depreciation, depletion, intangible development costs, etc., equivalent to $1.49 a share (par $25) on 2,254,725 combined Class A and Class B shares. This compares with $4,115,253 or $1.83 a share on 2,247,425 combined shares in first half of 1929.

Net income for quarter ended June 30 amounted to $1,946,845 after above charges, equal to 86 cents a share on 2,254,725 shares of combined Class A and B stocks, comparing with $1,420,595 or 63 cents a share on 2,258,317 combined shares in preceding quarter and $2,226,881 or 99 cents a share on 2,247,425 combined shares in June quarter of previous year.

Amerada Petroleum

Amerada Corp. reports for quarter ended June 30, 1930, net income of $477,645 after depreciation, depletion, taxes, etc., equivalent to 52 cents a share on 922,075 no-par shares of stock. This compares with net loss of $76,585 in preceding quarter and net income of $303,352, equal to 33 cents a share in second quarter of 1929. Net income for first six months of 1930 totaled $401,060 after above charges, equal to 43 cents a share on 922,075 shares. This compares with $354,114, equal to 39 cents a share, in first half of previous year.

Standard of Indiana

Directors of the Standard Oil Co. of Indiana declared the regular cash dividend of 62½ cents a share payable on September 15 to stockholders of record at the close of business August 16.

Wilcox Oil and Gas

H. F. Wilcox Oil & Gas Co. reported for the first half of the present year net income of $514,291, after charges, equal to $1.20 a share on 428,967 shares of no-par capital stock outstanding. This compared with $222,784, or 52 cents a share on 427,967 shares, in the first half of 1929. Net for the June quarter was $430,374, after charges, or $1 a share on 428,967 shares, comparing with $83,917, equal to 20 cents a share, in the preceding quarter, and $155,175, or 36 cents a share on 427,967 shares in the second quarter of 1929. The directors of the company recently voted to continue the policy of expansion by reinvesting income in filling stations and refineries instead of returning to a dividend basis. During 1929 substantial amounts were invested in the refining and marketing departments.

Hancock Oil of California

Hancock Oil of California declared regular dividend of 25 cents each on the Class A and Class B shares, placing the stocks on a $1 annual basis, against $1.75 previously. Dividends are payable September 1 to stock of record August 15.

Standard of Kansas

Standard Oil Co. of Kansas reports for six months ended June 30, 1930, net profit of $381,766 after taxes, depreciation, etc., equivalent to $1.19 a share (par $25) on 320,000 shares of capital stock.

Richfield Oil

Application of the Richfield Oil Co. of California for listing of 250,000 additional shares of $25 par common stock has been approved by governors of the Los Angeles Stock Exchange. A similar application is now pending before governors of the New York Stock Exchange.

Panhandle Producing & Refining

Panhandle Producing & Refining Co. and its subsidiaries report for the three months ending June 30 net loss after taxes, depreciation, depletion and amortization, intangible drilling costs, interest and minority interest of $73,768, compared with net profit of $66,537, or $2.60 a share, on the preferred stock last year. Six months: Net loss, $36,542, compared with net profit of $99,457, or $3.89 a share on the preferred stock last year.

Signal Oil & Gas

Signal Oil & Gas Co. reports for six months ended June 30, net profit of $623,521 after depreciation, depletion, federal taxes, minority interests, etc., equivalent to $2.75 a share (par $25) on 266,940 combined shares of Class A and B stocks. This compares with $666,382, or $3.21 a share on 207,490 combined shares in the first six months of 1929.

Lion Oil Refining

Lion Oil Refining Co. for six months ended June 30, reports profit of $19,054 after charges, depreciation, depletion, but before federal taxes, against profit of $502,287 in first six months of 1929. Sales amounted to $3,666,992, compared with $3,580,970. Profit for quarter ended June 30 was $17,339 after charges, depreciation and depletion, but before federal taxes, comparing with profit of $1,715 in preceding quarter and profit of $518,106 in second quarter of previous year.

Consolidated Gas

Consolidated Gas Co. of New York declared regular quarterly dividend of $1 on the common stock, payable September 15 to stock of record August 15.

Texas Pacific Coal & Oil

Texas Pacific Coal & Oil Co. reports for quarter ended June 30, 1930, profit of $273,519 after expenses and charges, but before depreciation and depletion, comparing with $374,034 in preceding quarter and $541,513 in June quarter of 1929. Profit for first half of 1930 amounted to $647,553 before depreciation and depletion, against $969,655 in first half of previous year.

Louisiana Oil Refining

Louisiana Oil Refining Corp. and subsidiaries report for quarter ended June 30, 1930, consolidated profit of $111,608 after interest, depreciation, depletion, etc., but before federal taxes, comparing with net loss of $63,798 in preceding quarter and profit before federal taxes of $504,238 in June quarter of previous year. For six months ended June 30, profit before federal taxes amounted to $47,810 comparing with $743,273 in first half of 1929.

Independent Oil & Gas

Independent Oil & Gas Co. and subsidiaries report for quarter ended June 30, 1930, net income of $778,085 after interest, taxes, depreciation and depletion, equivalent to 56 cents a share on approximately 1,379,000 no-par shares of stock. This compares with $743,195 or 54 cents a share in preceding quarter and $1,616,205 or $1.17 a share in June quar-

(Continued on Page 152)

INDEPENDENT OILS ON NEW YORK CURB

Quotations Compiled by Francis, Bro. & Co., Associate Members of New York Curb, Kennedy Building, Tulsa, Okla.

1930 High	1930 Low	Week ended July 30 Sales	High	Low	Close	Stocks—		Outstanding capital	Par value	Div. rate	Last paid	1927 High	1927 Low	1928 High	1928 Low	1929 High	1929 Low
⅜	⅛	200	3/16	3/16	3/16	American Consolidated Oilfields		$11,018,000	$5	.....	.....	2 7/8	.55	1½	.53	72c	⅛
4½	1½	400	2¼	2¼	2¼	American Maracaibo	(sh)	700,000	N.P.	.....	.....	7½	2¾	9½	3⅛	8⅝	1⅛
1⅝	1	300	1¼	1¼	1¼	Argo Oil	(sh)	683,971	$10	.....	.....	2¾	1	4½	2¼	5	1½
21	17	100	17	17	17	British American (new, C.W.I.)		$1,311,321	N.P.	25cQ*	1- 2-30	40	20½	55	32¾	62	7⅞
						Caribbean Syndicate (new)		$131,250	25c	.....	.....	28¼	15½	4½	3⅞	4⅞	1
2¾	¾	1,600	1⅜	1¼	1¼	Cities Service	(sh)	24,290,359	N.P.	30cA†	1- 2-30	58¾	40¼	90⅞	54	68⅛	20
44¼	24⅛	21,100	29	28	28⅛	Cities Service pfd.	(sh)	1,500,000	N.P.	50cM	1- 2-30	95⅜	87	103½	94½	98¾	84
93⅞	88	100	90⅝	90⅝	90⅝	Colombia Syndicate		$2,000,000	$1	.....	.....	3⅞	1⅜	3¼	.76	2	⅛
¾	¼	500	⅜	5/16	5/16	Consolidated Royalty		$5,000,000	$10	15cQ	10-25-29	9¾	6⅜	8⅞	6¼	11⅛	2½
5⅞	3½	200	3½	3½	3½	Creole Petroleum E	(sh)	5,977,873	N.P.	.....	.....	14⅞	9½	17½	9½	11¾	5⅝
7⅝	5½	3,900	6⅝	6⅜	6⅝	Crown Central	(sh)	587,000	N.P.	.....	.....	3	.50	3¼	.76	2½	¼
1	¼	100	½	½	½	Darby Petroleum	(sh)	1,019,392	N.P.	25cQ	1-15-30	12	4	33½	3¼	26	6½
21¾	12	100	13	13	13	Derby Oil & Refining	(sh)	500,000	N.P.	.....	.....	2½	74	2¼	1	11	2
11	4½	100	7⅛	7⅛	7⅛	Derby Oil & Refining pfd.		$48,500	N.P.	.....	.....	16¾	4	21⅛	7½	44	20¾
60	30	25	44¼	44¼	44¼	Gulf Oil Corp.	(sh)	4,504,921	$25	37½cQ	1- 1-30	118	86¼	165	101⅛	209	115
166⅞	117⅛	900	128¾	125	125	Intercontinental Petroleum		$5,682,000	$5	.....	.....	2½	.80	3⅜	1	2⅞	⅜
1¾	¾	900	¾	¾	¾	Kirby Petroleum	(sh)	750,000	N.P.	.....	.....	2¼	1⅛	3	1¼	3⅝	1¼
3	1⅝	200	1¾	1¾	1¾	Leonard Oil & Development		$50,000,000	$25	.....	.....	10⅞	5⅛	9⅜	5⅛	6⅛	1
4¾	1⅛	700	1¾	1¾	1¾	Lion Oil & Refining	(sh)	250,000	N.P.	50cQ	1-31-30	27½	20	43⅞	20	38⅞	18
29	18⅝	700	20⅞	20¾	20⅞	Lone Star Gas	(sh)	5,000,000	N.P.	20cQ	12-31-29	59⅜	37	69⅛	48½	67⅞	28
55⅞	34⅛	500	39	38⅛	38⅛	Magdalena Syndicate	(sh)	850,000	$1	.....	.....	2⅞	.80	1⅞	.50	1¼	⅛
7/16	¼	600	¼	¼	¼	Margay Oils		$160,000	N.P.	50cQ	1-10-30	52	12	48½	32	38½	14
16	12	100	12½	12½	12½	Mexico-Ohio Oil		.....	....	.....	.....	12⅛	5	8	2¾	6⅜	2½
7½	2	200	3	3	3	Mountain & Gulf		$4,000,000	$1	2cQ	1-15-30	1½	1	1¾	.76	1½	¼
¾	⅜	800	½	½	½	Mountain Producers		$1,682,182	$10	40cQ	1- 2-30	29¼	22¾	28⅞	19½	22⅞	7
12½	8	100	8⅞	8⅞	8⅞	New Bradford Oil		$1,095,291	$5	12½cQ	1-15-30	5⅞	4⅝	5⅝	4¼	5	2½
3½	2⅜	100	2⅝	2⅝	2⅝	New Mexico & Arizona		$1,000,000	$1	.....	.....	16	9¼	11⅞	7⅛	9⅜	2¼
7¼	3⅛	100	3⅝	3⅝	3⅝	North Central Texas	(sh)	400,000	N.P.	15cQ	12- 2-29	12¾	9½	14¼	8½	18½	6⅛
11¼	6	200	7½	7½	7½	Pandem	(sh)	489,875	N.P.	.....	.....	9⅜	3¼	6	2⅛	3½	½
2½	½	4,500	⅝	½	⅝	Pantapec Oil	(sh)	1,506,000	N.P.	.....	.....	12⅛	7	15⅝	8½	10½	1⅞
4⅜	1⅞	600	2⅛	2⅛	2⅛	Pennok Oil		$150,000	N.P.	.....	.....	13½	5⅛	7¾	4⅞	7¾	4⅝
..	..	No sales.				Red Bank Oil	(sh)	250,000	N.P.	.....	.....	24⅜	7	18	4⅞	16	9⅝
10½	8⅛	100	8⅛	8⅛	8⅛	Reiter-Foster	(sh)	388,584	N.P.	10cQ	12- 9-29	15½	3½	12⅞	4⅛	8½	1⅛
5⅜	2⅛	100	3⅜	3⅜	3⅜	Ryan Consolidated	(sh)	500,000	N.P.	.....	.....	7	4½	12	4⅛	11	3
8⅝	3⅝	200	4⅛	4⅛	4⅛	Salt Creek Consolidated	(sh)	1,286,300	$10	10cQ	1- 2-30	8	5¼	7¼	5½	5⅞	1⅞
2½	1⅜	200	1¾	1¾	1¾	Salt Creek Producers	(sh)	1,496,859	$10	50cQ	2- 1-30	35½	27¼	35	23⅛	25⅞	9
15¼	8¼	300	10¾	10¾	10¾	Savoy Oil		$750,000	$5	.....	.....	7	1¼	3½	1	2½	1/16
1	½	100	½	½	½	Transcontinental pfd.		.....	....	.....	.....	..	..	..	..	..	..
..	..	No sales.				Venezuelan Petroleum	(sh)	755,090	$5	5cQ	11-15-29	7⅜	4¼	9⅛	4¾	6½	1⅜
4½	2	800	2⅝	2⅝	2⅝	Woodley Petroleum		$500,000	$1	.....	.....	7	4¾	8¼	4⅞	9½	2
5	2	200	4¼	4¼	4¼	Y Oil & Gas		$100,000	N.P.	.....	.....	6	1¾	8⅜	2⅛	2⅞	¼
2½	½	300	1	¾	¾												

*Including one-half per cent monthly in stock. †Payable monthly and a monthly stock dividend of one-half per cent. x Ex-dividend.

STANDARD OIL STOCKS ON NEW YORK CURB

Quotations Compiled by Francis, Bro. & Co., Associate Members of New York Curb, Kennedy Building, Tulsa, Okla.

1930 High	1930 Low	Week ended July 30 Sales	High	Low	Close	Stocks—		Outstanding capital	Par value	Div. rate	Last paid	1927 High	1927 Low	1928 High	1928 Low	1929 High	1929 Low
18½	12¼	400	18½	18⅜	18½	Anglo-American Oil (vot. C.O.D.)		£4,192,635	£1	.36⅞	11-27-29	21⅝	17⅞	22⅜	14⅞	17	11
1	⅜	200	½	½	½	Atlantic Lobos		.....	.....	.....	.....	..	..	..	..	..	..
25	14	50	17	17	17	Borne Scrymser		$1,000,000	$25	$1SA	10-15-29	59	50	56½	44½	46½	25
69	55¼	100	56	55¼	55¼	Buckeye Pipe Line		$10,000,000	$50	$1Q	12-14-29	60	45	76	53	74¼	55
184⅞	140⅜	100	154¾	154¾	154¾	Chesebrough Mfg.		$3,000,000	$25	$1Q*	12-30-29	126	76½	161	117	210	130
17¾	10	500	10	10	10	Continental Oil (V.T.C.)		$36,057,840	$10	.....	12-15-27	22⅝	16¼	23	16	29	10
65¾	30½	100	35	35	35	Cumberland Pipe Line		$1,500,000	$50	$1Q	12-15-29	137	89	114	67	75¾	40
54¾	40	100	40	40	40	Eureka Pipe Line		$5,000,000	$100	$1Q	11- 1-29	68½	47	88	64⅛	70½	42
7	2½	200	4⅛	4⅛	4⅛	Galena Oil Corp.		$16,000,000	$100	.....	.....	13½	3½	13	4¼	6½	3
119	78	1,900	90⅛	88⅜	88⅜	Humble Oil & Refining		$74,103,300	$25	50cQ	1- 1-30	68½	54	114¾	59¼	128	74⅛
320	303	100	320	320	320	Illinois Pipe Line		$20,000,000	$100	$10SA	12-16-29	182	123¾	290½	176½	340½	260
30	18⅛	600	20⅛	20	20⅛	Imperial Oil of Canada (new)	(sh)	26,421,768	N.P.	12½cQ	12- 2-29	64¾	37¾	104	56¾	41	22
41	31⅞	x500	32¾	32¾	32¾	Indiana Pipe Line		$3,000,000	$10	50cQ‡	2-15-30	94½	61	91⅞	74⅜	41⅞	26
24	17⅝	3,700	19⅛	19	19	International Petroleum	(sh)	14,247,088	N.P.	12½cQ	12-16-29	29	28¼	55	35	30⅜	15
22⅜	15⅛	200	17	17	17	National Transit		$6,362,500	$12.50	25cQ‡	12-16-29	24	13½	32⅜	19⅜	25⅛	10½
21⅜	10⅛	500	18	17⅞	18	New York Transit (new)		$1,000,000	$10	40cQ†	1-15-30	44½	31¼	75	38½	17½	10
54	35½	50	37½	37½	37½	Northern Pipe Line		$2,000,000	$50	$2SA	1- 2-30	100	70	69	56½	63	41
76⅜	62⅛	100	66	66	66	Ohio Oil Co.		.....	.....	.....	.....	..	..	..	..	..	..
34⅛	32½	2,600	33	32⅝	32⅝	Ohio Oil (new W.I.)		$60,000,000	$25	5cQ‡	12-14-29	67⅛	52	84	58½	79⅞	64⅛
32	17	600	23	22	22	Penn Mex Fuel		$10,000,000	$25	50cQ	12-14-29	39	12	84	28	44½	20
33	14⅝	200	14⅝	14⅝	14⅝	Solar Refining		$4,000,000	$25	$1.25SA	12-20-29	..	..	..	..	50	29
20⅞	13	100	18¼	18¼	18¼	Southern Pipe Line		$1,000,000	$10	50cQ	.....	27¼	15½	19	15	22½	13
45⅞	35	100	37½	37½	37½	South Penn Oil (new)		$30,000,000	$25	50cQ	12-30-29	41½	35	71⅞	36¾	60¼	35⅛
65	35	100	45¼	45¼	45¼	Southwest Pennsylvania Pipe Lines		$1,750,000	$50	$1Q	1- 10-29	83	55½	102	70	70	60
59⅞	47⅝	3,000	51⅛	50½	50¾	Standard Oil of Indiana		$348,175,069	$25	62½cQ‡	12-16-29	81½	64⅜	95⅞	70⅞	63	45
40½	30⅛	2,500	32¼	32	32	Standard Oil of Kentucky		$25,654,516	$10	40cQ	12-16-29	130	111½	179¾	122¼	46⅞	29
48⅞	44⅛	300	46½	46⅛	46⅛	Standard Oil of Nebraska		$4,649,225	$25	62½cQ‡	12-20-29	49½	40	54⅞	39⅞	50¼	40
108½	77	50	78½	78½	78½	Standard Oil of Ohio		$14,000,000	$25	62½cQ	1- 2-30	87½	72	134	71	129	60
10	7	100	7	7	7	Swan-Finch Co.		$861,466	$25	.....	12- 2-29	21	14½	23½	16	18	10
97⅞	76¼	700	86¼	85	85	Vacuum Oil Co.		$126,180,350	$25	$1Q	12-20-29	..	..	111	72	133¾	75

*Plus 50 cents extra. †Plus 10 cents extra. ‡Plus 25 cents extra. x Ex-dividend.

TRANSACTIONS IN OIL SHARES ON NEW YORK STOCK EXCHANGE

Quotations Compiled by Francis, Bro. & Co., Members of the New York Stock Exchange and Associate Members of New York Curb, Kennedy Building, Tulsa, Okla.

1930 High	1930 Low	Week ended July 30 Sales	High	Low	Close	Stocks—		Outstanding capital	Par value	Div. rate	Last paid	1927 High	1927 Low	1928 High	1928 Low	1929 High	1929 Low
31½	18	300	23½	23½	23½	Amerada Corp.	(sh)	922,075	N.P.	50cQ	1-31-30	37⅝	27⅝	43⅞	27⅛	42⅝	17½
37	15¼	200	18½	18½	18½	American Republic Corp.	(sh)	209,180	N.P.	.....	3-20-29	82½	35⅛	85	51⅛	64¾	12½
51	32½	40	41⅝	40	40	Associated Oil		$57,260,300	$25	50cQ	12-31-29	50¼	35	53⅜	37½	47¼	34½
51⅜	30⅛	6,400	38	36¼	36⅜	Atlantic Refining		$66,763,775	$25	25cQ	12-16-29	131⅜	104	66⅜	50	77⅞	30
34	20½	3,800	23⅜	23	23	Barnsdall Corp. A		$56,546,600	$25	50cQ	12- 7-29	35½	20¾	53	20	49⅛	20
30½	18⅜	6,600	21⅞	21	21	Continental Oil of Delaware	(sh)	4,741,554	N.P.	.....	3-31-27	..	..	..	..	47⅛	18
71⅛	38⅝	700	45⅞	45	45	General Asphalt	(sh)	413,333	N.P.	50cQ	.....	96¾	65	94⅞	68	94⅜	42¼
116⅞	52¼	18,800	88	82½	82½	Houston Oil		$24,968,600	$100	.....	.....	175¾	60½	167	79	109	26
32	19⅜	300	22	22	22	Independent Oil & Gas	(sh)	1,362,295	N.P.	50cQ	1-31-30	32¾	17⅝	38⅜	21¾	39⅜	17¾
28⅜	8¾	6,600	13¼	12⅜	12⅜	Indian Refining		$12,565,070	$10	.....	5-31-24	12⅛	7⅝	39⅝	9	53	13⅛
29½	19¼	200	29¼	29¼	29¼	Lago Oil & Transport	(sh)	3,992,122	N.P.	.....	5- 1-27	37¾	20½	39½	27⅜	38⅜	16½
12	8	600	9	8¾	8¾	Louisiana Oil Refining	(sh)	1,190,063	N.P.	.....	.....	18⅛	10	19¾	9⅜	18	7
10⅜	4½	400	5	5	5	Maracaibo Oil	(sh)	330,000	N.P.	.....	.....	22¾	12	25½	12½	18½	5⅛
37	16⅛	10,000	23⅝	22⅛	22⅛	Mexican Seaboard	(sh)	1,244,383	N.P.	.....	12-15-20	9¼	3	72	4⅝	69⅜	8¼
33	22⅛	200	24⅛	23¾	23¾	Mid-Continent Petroleum	(sh)	1,857,912	N.P.	50cQ	12-15-29	39⅜	25½	44½	25⅛	39⅞	22⅛
2½	⅞	800	1	1	1	Middle States ctfs.		$23,736,130	$10	.....	7- 1-23	3¾	1⅝	7⅜	2⅜	5⅛	¾
64¼	51⅝	100	58⅝	58⅝	58⅝	Pan American P. & T.		$50,084,700	$50	.....	10-20-27	65⅞	40⅛	50⅞	38¼	69	40½
67½	50½	500	59⅛	59	59⅛	Pan American P. & T. "B"		$121,110,650	$50	.....	11-15-24	66⅜	40¼	58⅞	37⅜	69¼	40½
..	..	No sales.				Pan American Western "B"		$400,000	N.P.	.....	1-30-27	37⅞	16¾	28⅜	15½	18½	13⅝
12¾	4⅛	200	7½	7½	7½	Panhandle P. & R.	(sh)	199,370	N.P.	.....	.....	18⅞	8	21¾	11½	15¼	3
80	47½	100	72	72	72	Panhandle P. & R. pfd.		$2,564,400	$100	.....	7- 2-23	83	54	108	70	76	47½
44¾	29⅛	10,700	33⅞	32½	33	Phillips Petroleum	(sh)	2,593,075	N.P.	50cQ	1- 2-30	60¼	36¼	53⅞	35¼	47	24¼
..	..	No sales.				Phillips Petroleum rts.		.....	.....	.....	.....	..	..	..	..	..	..
2½	1	900	1¼	1⅛	1⅛	Pierce Oil Corp.		$29,622,831	$25	.....	.....	1⅛	½	5¼	½	3⅜	1
7⅛	2¼	400	5⅜	5¼	5⅜	Pierce Petroleum	(sh)	2,500,000	N.P.	.....	.....	5½	2½	7	3½	5⅞	½
54	35⅝	100	36⅞	36⅞	36⅞	Prairie Oil & Gas		$60,848,000	$25	50cQ*	12-31-29	55½	45⅝	68	46	65⅝	40½
60	44⅛	600	46½	46	46	Prairie Pipe Line		$101,250,000	$25	75cQ†	12-31-29	190	130¾	280	172	65	45
11⅞	6½	1,100	8	8	8	Producers & Refiners		$37,438,950	$50	.....	9-15-23	33⅞	16¾	29⅞	16	25⅞	4
40	30	10	35	35	35	Producers & Refiners pfd.		$2,845,350	$50	.....	5- 1-25	50	36⅞	49⅝	41	46¾	25½
27¼	19½	1,000	21⅝	21⅝	21⅝	Pure Oil		$75,959,250	$25	37½cQ	12- 2-29	33½	25	31⅝	19	30¾	20
28¼	14¾	4,000	18	17½	17½	Richfield Oil		$52,410,875	$25	50cQ	11-15-29	28⅝	25⅞	56	23	49⅝	20
25¾	15⅝	300	17¾	17⅛	17⅛	Rio Grande Oil	(sh)	1,236,270	N.P.	$2A	7-25-29	..	..	37½	32	42½	15
56½	49⅛	x3,400	52⅛	51⅝	51⅝	Royal Dutch, N. Y.	(sh)	611,303	$1.873	.....	9-13-29	54½	44¼	64	44⅝	64	43⅛
48⅜	42⅜	10	45⅞	45⅞	45⅞	Shell Transport & Trading Co.		£23,985,000	£1	$1.45	7-23-29	48⅝	40½	47⅞	41⅜	51½	40⅝
25½	18	2,200	19⅛	19	19	Shell Union Oil	(sh)	13,066,497	N.P.	35cQ	12-31-29	31¾	23⅝	39¼	23¼	31¾	19
37	18	600	22	21	21	Simms Petroleum		$8,353,620	$10	40cQ	12-14-29	25⅜	14¼	27¼	18⅛	40⅛	15
32	20	11,000	24¼	23¾	23¾	Sinclair Consolidated	(sh)	5,500,000	N.P.	50cQ	1-15-30	22⅜	15	46¾	17⅜	45	21
112¼	108	100	110½	110½	110½	Sinclair Consolidated pfd.		$16,025,250	$100	$2Q	11-15-29	104½	97	110	102½	111	103
42	28½	900	30¾	29⅛	29⅛	Skelly Oil		$27,441,250	$25	50cQ	12-16-29	37⅜	24⅛	42⅝	25	40½	28
75	55½	800	62¾	62	62	Standard Oil of California	(sh)	12,594,098	N.P.	62½cQ	2-15-30	60¾	50⅜	80	63	81⅞	51½
49	29	700	34	33½	33½	Standard Oil of Kansas		$8,000,000	$25	50cQ	12-16-29	20⅞	14⅝	37¾	15	33¾	18
84⅞	58	58,400	74	71½	72	Standard Oil of New Jersey		$634,999,200	$25	25cQ*	12-16-29	41⅜	35⅛	59⅜	37¾	83	49
40⅜	30	12,400	32¼	31¾	32	Standard Oil of New York		$445,223,675	$25	40cQ	12-16-29	34⅛	29¾	33¼	28¾	48⅛	31¾
70	50	200	58¼	58¼	58¼	Sun Oil	(sh)	1,416,869	N.P.	25cQ	12-16-29	34⅞	30	77	31½	86⅜	55
9⅜	2	20,600	4	2	2⅜	Superior Oil Corp.	(sh)	776,979	N.P.	.....	12-20-20	..	..	..	..	24	5¼
60½	50⅛	1,800	52⅞	52¼	52¼	The Texas Corporation		$246,204,900	$25	75cQ	1- 1-30	58	45	74¾	50	71⅞	50
14½	8¼	200	9⅛	9⅛	9⅛	Texas Pacific Coal & Oil Co.		$9,304,890	$10	2½%A‡	12-31-29	18⅞	12	26⅝	12⅛	23⅞	9½
31	19½	200	30¾	28¾	28¾	Tide Water Oil	(sh)	2,191,759	N.P.	20cQ	12-31-29	29⅛	19	41½	19⅝	40	14
94⅞	85½	100	85¼	85	85	Tide Water 5½% pfd.		$19,947,000	$100	$1.25Q	11-15-29	90⅛	85	100⅛	86	97½	85⅛
17¾	10¾	2,700	14¼	14	14	Tide Water Associated	(sh)	5,560,424	N.P.	30cS	2-15-30	19⅛	15¾	25	14¾	23½	10
89¾	78	400	84⅞	84½	84½	Tide Water Associated pfd.		$73,284,500	....	$1.50Q	2- 2-30	..	..	..	..	90⅞	74⅛
24	16¼	4,000	18½	18¼	18¼	Transcontinental Oil	(sh)	3,742,029	N.P.	.....	.....	10⅜	3¾	14¾	7¼	15¼	5⅛
50	37	600	41	40½	40½	Union Oil of California		$104,342,375	$25	50cQ	11- 9-29	56½	39⅝	58	42⅜	57	42⅛
38½	25¼	300	28	27¾	27¾	Union Tank Car	(sh)	1,254,048	$100	$1.25Q	12- 2-29	127½	94	128⅛	110	163⅜	121⅞
27	12¾	800	13¾	13⅜	13⅜	Warner-Quinlan	(sh)	632,948	N.P.	50cQ	1- 2-30	34½	24½	44⅞	26	42⅞	15
..	..	No sales.				White Eagle Oil & Refining	(sh)	505,100	N.P.	50cQ	1-20-30	27½	20	38	20⅛	38	25
31	11½	300	16½	16	16½	Wilcox Oil & Gas	(sh)	428,907	N.P.	.....	5-10-28	..	..	..	..	29¾	12⅞

*Plus extra dividend of 25 cents. †Plus extra dividend of 50 cents. ‡Payable in stock. x Ex-dividend.

In comparing highs and lows for the several years in the three tables, it will be necessary to take into consideration cases where there have been splits in the stock.

PLAN TO EQUALIZE TEXAS CRUDE OUTPUT

(Continued from Page 29)

per barrel, whereas in most fields of West Texas the oil is being flowed with from 300 to 500 cubic feet per barrel.

Field—	Present production as of July 19, 1930 (bbls.)	Daily permitted production during proration period (bbls.)
East Texas (including Anderson, Cherokee, Navarro, Freestone, Limestone and Van Zandt)	39,350	39,350

Old East Central Pools

We recommend that no reductions be attempted in the old fault-line fields, including Mexia, Powell, Richland, Currie, and Nigger Creek, for the reason that these wells are already producing such amounts of water that they cannot be curtailed without resulting in waste.

Van Field (Van Zandt County)

This field, although less than a year old, has demonstrated that it has an immense potential. It is being operated at present under the unit plan, and production is being held to 25,000 bbls. per day, although its potential is many times that amount. In connection with this field it should be borne in mind that there are certain wells now drilling outside of the unit which may prove up additional areas; and, if so, the entire area should be included under proration, not to allow more than 25,000 bbls. per day of total takings from the field during this proration period.

Field—	Present production as of July 19, 1930 (bbls.)	Daily permitted production during proration period (bbls.)
Southwest Texas (including Bexar, Caldwell, Atascosa, Guadalupe, Bastrop, Williamson, Milam, Live Oak, McMullen, Webb, Duval, Jim Hogg and Zapata Counties)	72,400	66,150

Southwest Texas

In the Southwest Texas district, we call special attention, first, to the Darst Creek Pool, in Guadalupe County, where proration has been in effect until the last few days, with a total production under proration of 26,500 bbls. This proration has been upset by certain injunction suits against the Railroad Commission, and we wish to urge that your honorable body use all force at its disposal, and obtain the full co-operation of the Attorney General's department to support proration and to dissolve the recently granted temporary injunction. When such has been accomplished, we urgently recommend that the Darst Creek proration again be put into effect at the former maximum of 26,500 bbls. per day.

In the Salt Flat Field, in Caldwell County, we recommend that the present production of 20,900 bbls. be reduced to 15,675 bbls.

In the Laredo district, including the new Escobas Field, in Zapata County, we recommend that the settled production be curtailed 10 per cent; and that the Escobas Field be curtailed to 50 per cent now, and an additional percentage later, if necessary. This district now has 11,700 bbls., and should be reduced to a maximum of 10,000 bbls.

In the new Chapman Field, in Williamson County, there is a present potential production variously estimated as high as 22,000 bbls., with a pipe line outlet of 7,000 bbls. We recommend that the production be held strictly to this present pipe line outlet, or 7,000 bbls.; and we wish to call attention here to the very serious situation which has arisen from the disorderly and wasteful marketing of this oil, a condition which is due alike to the actions of certain purchasing companies and of the producers in the field.

Field—	Present production as of July 19, 1930 (bbls.)	Daily permitted production during proration period (bbls.)
Gulf Coast district (including Orange, Jefferson, Hardin, Liberty, Chambers, Galveston, Harris, Washington, Austin, Fort Bend, Brazoria, Wharton, Matagorda, Refugio, Kleberg and Bee Counties)	183,500	150,500

Refugio and Pettus

In this district, the Refugio Field is now producing 36,000 bbls. per day from 105 wells. We recommend a curtailment of 33⅓ per cent, to 24,000 bbls. total, unless further investigation by your honorable commission shall show that such a cut would endanger the life of these wells, with the resulting waste. This is a semiflush field, and it is certainly not fair to ask the producers of North and West Texas to bear the heavy load of proration without some of the fields along the Gulf Coast sharing therein.

The new Pettus Field, in Bee County, is another danger spot. We recommend that everything possible be done to discourage drilling of new and unnecessary wells in this field, and that the production be rigidly restricted to the present 6,200 bbls. per day. One well has just been completed, estimated good for 2,000 bbls. per day, in this field, and if more wells of similar size are encountered, the field will undoubtedly require a carefully worked out proration plan to handle the situation.

There are several other fields in the Gulf Coast district which can undoubtedly stand some curtailment. The production of the other fields, excluding the Pettus and Refugio, totals 141,000 bbls. For those fields we recommend that the production be curtailed by at least 15 per cent, or 21,000 bbls. per day, distributing such cuts where same may be best applied in the judgment of your honorable commission, or the committees working in those fields. In this case again, curtailment measures should be applied to flush or semiflush wells, without curtailing pumping wells, which are producing such quantities of water as to endanger their continued existence with resulting waste of this natural resource.

Reference is here made to the report of David Donoghue, technical adviser of the Joint Committee of the Independent Petroleum Association, the Mid-Continent Oil and Gas Association, and the purchasing companies, which has already been filed with R. D. Parker, chief supervisor of the Oil and Gas Division of your honorable commission. In this report there is contained a comprehensive survey of conditions in Texas, as of June 28, 1930, showing Texas production as of that date totaling 863,000 bbls. per day, with a visible pipe line outlet of approximately 76,000 bbls. less, or 786,400 bbls. total. Mr. Donoghue's report sets out in a condensed form the results of the investigation which was conducted in line with your request, and on the facts disclosed by said report the foregoing suggestions are based.

New Pools

4. Should any new pool be brought in during this proration period, or any extension thereof, as the result of drilling in progress at the effective date of the commission's order, or as the result of drilling done pursuant to a contract in existence as of such effective date, then the production from such new pool shall be limited to such an amount as the commission, upon hearing, shall then determine.

5. That new wells in old pools drilled after the effective date of your order be divided into two classes:

(a) Wells, the drilling of which was made necessary to protect the lease premises on which same were drilled, from offset drainage and, or forfeiture.

(b) All other new wells in old pools.

That the production from Class (a) new wells be run in with the production from the lease on which same are respectively situated, and be figured in arriving at the then average daily production per well per lease; that the production from Class (b) wells be shut in and not produced during the proration period, or any extension thereof, except in such manner as the commission may after proper hearing allow.

6. That the order issued by your commission specify as to each district the character of wells which shall be prorated, in order to accomplish the reduction hereinbefore recommended for that particular area, bearing in mind that in all cases the small or marginal well, or the well producing large quantities of water, shall be protected, and that no attempt shall be made to curtail any well in such a manner as to result in its abandonment, and consequent actual waste of petroleum.

7. That such proration order be not construed as relieving all persons from a strict compliance with all statutory laws governing the production, transportation, storage, and purchase of oil.

Upon the hearing before your honorable body, representatives from the various fields, pools, and districts will present the pertinent facts to assist you in the framing of your specific order as same applies to such particular field, pool, or district. We recommend that in the enforcement of your orders as they apply to each separate field, pool, or district, such local committees and, or supervisors be utilized, and granted such powers and authority as by your order you may designate.

The foregoing report and suggestions are respectfully submitted as a compliance with your request, and in as much detail as we feel is possible in this short period, and we hereby pledge our full co-operation for any future service you may call upon us to render in this connection.

Respectfully submitted at Austin, Texas, this 30th day of July, 1930, by the undersigned:

Robert R. Penn, chairman; John E. Kilgore, Wichita Falls; M. S. Church, Dallas; Charles P. McGaha, Wichita Falls; C. W. Kennon, Jr., Mexia; Walter K. Campbell, Wichita Falls; J. S. Bridwell, Wichita Falls; Ed Peterson, Wichita Falls; J. A. McCarty, Wichita Falls; T. O. Shappell, Wichita Falls; J. C. Reynolds, Wichita Falls; John F. O'Donohoe, Wichita, Falls; E. H. Eddleman, Wichita Falls; John F. Mouser, Eastland; J. H. Clark, Amarillo; H. J. Struth, Houston; W. N. Finnegan, Jr., Houston; R. L. Underwood, Wichita Falls; R. C. Stanford, Wichita Falls; L. H. Simpson, Mexia; W. L. Todd, Dallas; Warner Clark, Dallas; M. W. Blair, Wichita Falls; P. B. Flynn, Wichita; Harvey Harris, Wichita Falls; O. O. Franklin, Vernon; P. C. Murphy, Houston; L. H. Cullum, Wichita Falls; W. D. Gully, Brownwood; H. P. Evans, Brownwood; David Donoghue, Fort Worth.

INACTIVITY RULES IN EASTERN MARKETS

(Continued from Page 139)

fined oils at Atlantic and Gulf Coast ports for the week ended July 26 totaled 443,000 bbls., a daily average of 63,286 bbls., compared with 1,089,000 bbls., a daily average of 155,571 bbls. for the previous week and a daily average of 97,750 bbls. for the four weeks ended July 26. Details follow:

	Bbls. of 42 gals.
At Atlantic Coast ports—	
Baltimore	154,000
Boston	97,000
New York	117,000
Philadelphia	75,000
Total	443,000
Daily average	63,286
At Gulf Coast ports—	
All ports	None
At Atlantic and Gulf Coast ports—	
Total	443,000
Daily average	63,286
Daily average four weeks	97,750

A cargo of 67,000 bbls. of gasoline on the Solana (Associated Oil Co.) was shipped from the Pacific Coast during the week for New York.

CONSUMPTION HEAVY IN CHICAGO AREA

(Continued from Page 138)

The industrial demand is light and sellers are actually scouring the country for business.

There is getting to be a constant inquiry as to a possible change in tank wagon prices over this territory. The reason for this inquiry seems to be first, that it is about time for something of the kind and, second, the large number of stations which are designed to sell at less than the price established by the refiners for the state or locality. The assurance has been given that a change has not even been thought of in the meetings of the larger companies. It is the general opinion that the present scale is likely to hold over Labor Day. In the meantime, it is hoped that the refiners will have set their house in order by continued reduction in gasoline output. With crude holding at its present level and a more nearly balanced supply and demand, present retail prices would not be out of line.

UNITIZATION RECEIVES ANOTHER GOOD TRYOUT

(Continued from Page 34)

During the first 24 hours this well gauged 1,875 bbls. of oil with 4,200,000 feet of gas. The second 24 hours it produced 970 bbls., the third 1,407, the fourth 1,096, and the next 24 hours' gauge was 970 bbls. The oil tests 41.6° A.P.I. and commands a price of $1.47 per barrel.

This well is now prorated to 325 bbls. per day and is flowing against a back pressure of 175 pounds at well head.

Prairie Supervises Operations

The third test in the community block was located in the C NW NE, Section 8-19n-1w, and is known as No. 1 Rule. This well was finished in the Misener sand at 4,859-64 feet for 1,710 bbls. initial production and later shut in to 600 bbls. daily to meet proration requirements. The shut-in pressure at the well head is 300 pounds and the oil is being produced through a choke.

The fourth well has been drilled under the supervision of the Prairie Oil & Gas Co. and is located in the C SE SW, Section 5-19n-1w, and known as No. 1 Rosa Finnell. On July 26 the 6⅝-inch casing was set on the Viola lime at 4,847 feet for the Misener formation, either dolomite or sand, is missing in this well. The well is now drilling at 4,944 feet in Simpson sand and will be deepened to the Wilcox.

In No. 1 Rosa Finnell the Mississippi lime was found at 4,738-44 feet, which is 19 feet higher than in the No. 1 T. Finnell, the south offset well, or in the No. 1 Rule, the southeast offset. The Misener zone in this well has pinched out and the Viola lime was encountered at 4,845 feet. Structurally this well is level

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with No. 1 Kinnaman on the Viola and 38 feet higher than the Watkins well, both of which are to the east.

Drilling in this area has shown that as the high portions of the subsurface structure are approached the Misener zone is either dolomitic or missing. On the down dip side of the structure the Misener dolomite is replaced by a true quartz sand.

The two problems that will confront the operators in this area in the future will be to further develop the Misener productive area or to further prospect for the top of the Wilcox formations where the Misener zone is missing.

That there is a structural high in the Ordovician seems quite clearly indicated by a study of the well logs, especially the data secured from the position of the Mississippi lime.

Mississippi Lime Logged

Over an area 5 miles southeast-northwest and 4 miles northeast-southwest there has been five wells drilled that show that this Mississippi lime is 63 feet thick in Section 10-19n-1w and 53 feet thick in Section 12-19-1. To the northeast of the Kinnaman well this Mississippi lime is 310 feet thick in Section 26-20-1w and it is also 135 feet thick in the Continental well in Section 32-20-1w. In the Minnehoma well just west of the community block in Section 7-19-1w the Mississippi lime is 56 feet thick.

In No. 1 Kinnaman in Section 4-19-1w the Mississippi lime is only 3 feet thick. From this well the Viola formation slopes away in every direction and is 179 feet lower in the Marland-Lemon well in Section 10; 465 feet lower in the Magnolia well in Section 26-20-1w, and 243 feet lower in the Continental well in Section 32-20-1w.

In the Minnehoma well about a mile southwest of No. 1 Kinnaman the Viola formation was found 139 feet lower and it is 35 feet lower in the west offset, No. 1 Watkins. No. 1 Rosa Finnell found the Viola 38 feet higher than in No. 1 Watkins with the Misener section missing entirely.

Wilcox Sand Possibilities

The problem is to now locate the high carrying the Wilcox formation containing oil. Using the No. 1 Kinnaman well as the control, it seems that this high might be either just north of that location with an east-west axis, or it may be either to the northwest or northeast of No. 1 Kinnaman with axes running in either of those directions and either structure being much longer along the axis than across it. In other words, there are three possibilities as suggested by various geologists who have discussed and studied this area and one of them involves a more or less round structure, while the other two structures seem to indicate long, narrow formations.

To date production has been secured only in the Misener sand or dolomite and very little additional information as to the location of the Wilcox structure has been developed since the drilling of the No. 1 Watkins.

Advantages of Unitization

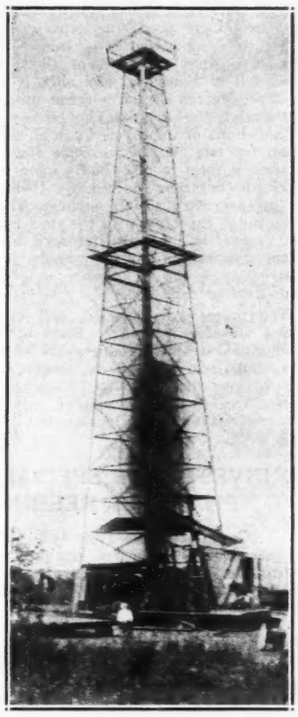
The development of this area in this manner emphasizes the gain to be made by handling acreage on the unitized basis, for if the ordinary procedure had been followed wells would have been drilled along the property lines of the 40-acre blocks, or 660 feet apart, whereas they are now placed in the center of the 40-acre tract.

As this structure has been developed by wells drilled by the Continental Oil Co. in Section 10-19n-1w, Minnehoma Oil Co.'s No. 1 Shadel in Section 7-19n-1w, Prairie-Slick and Marland's test in Section 32-20n-1w, it appears that the original well, No. 1 Kinnaman, drilled just east of the community block, is located on the axis of the structure, but the Wilcox high as a productive area has not been defined.

By correlating these wells drilled in this area of northwest Payne and southwest Noble Counties it appears that there may be two local highs on the major structure that lay along the boundary of these counties with a saddle between them. Sand conditions may be more important in influencing the accumulation of oil than stratigraphic irregularities but by working out the subsurface conditions with carefully located wells a number of dry holes or small wells, that would not be commercially profitable, will be avoided.

The royalty owners in the community block are working in accord with the producing companies and have agreed to accept offset royalty based upon the rate of production from No. 1 Kinnaman, which is located just outside of the community block.

This payment of royalty is saving the wells that would amount to approximately $180,000 and based upon the recovery from No. 1 Kinnaman as tabulated above means a real saving. If these two wells had been drilled and had produced at the same rate as No. 1 Kinnaman the gross production would have been worth about $75,000 per well, or less than the cost of drilling them.



Orlando community block No. 1 Rule, in Section 8-19n-1w. Oil following tools out of hole.

At the present rate of production of No. 1 Kinnaman they would each be making about 30 bbls. of oil daily and would be operated at a loss.

Future Possibilities

Now that something is known of the structure and its possibilities the community block can be developed to about its full productive capacity with four more wells at a total cost of approximately $360,000.

Without unitization each 40-acre tract would have been open to drill with four wells costing this amount, and the total production would not have justified this expenditure for the pool is even now on proration so the period of investment will be lengthened. Interest at 6 per cent per annum on $360,000 would amount to $24,600 or represents 16,700 bbls. of oil at $1.47 per barrel.

Operations of this character emphasize the desirability of drilling wells in the center of 40-acre tracts rather than moving up to the line and drilling the wells in the center of 10-acre blocks. When the wells cost upward of $100,000 to complete it requires nearly $400,000 investment in each 40-acre block for four wells and to pay back this investment at the present price of 36 gravity oil ($1.29) would require approximately 370,000 bbls. of oil gross, or at the rate of 8,700 bbls. per acre.

This does not take into account dry holes or very small wells that would be drilled in the course of a competitive drilling campaign which will be reduced to a minimum if community drilling is followed.

Recovery Per Acre

The possibilities of securing 8,700 bbls. of oil per acre can be judged by checking the production from other representative pools in Oklahoma fields given in the table below:

Pool—	Production per acre
Glenn	7,572 bbls.
Burbank	8,938 bbls.
Cushing	10,226 bbls.
Garber	10,398 bbls.
Bristow	4,967 bbls.
Cromwell	9,704 bbls.
Deep Rock (Payne County)	3,570 bbls.
Tonkawa (four sands)	18,903 bbls.

The majority of the above pools are comparatively shallow and the cost of wells was much lower than it is in drilling to deep production in north central Oklahoma, but a study of the production per acre is enlightening for several of these fields are very well known and are referred to as good examples of oil pools, yet the recovery per acre is less than 10,000 bbls. in most cases.

Advantages to Royalty Owners

With the large amount of shut-in oil in all pools in this country at this time production companies are hardly justified in making large investments in new wells because most of them have a reserve of oil in the ground that can be secured as rapidly as the proration conditions in the pools will permit.

There are also many advantages to accrue to the royalty owners such as the greater recovery of oil and the utilization of gas, lowering of cost and more prosperity for the working interests which will permit the drilling and producing of smaller wells and in general add to total recovery and longevity of wells, stabilizing of production, and spread of risks and making trading easier.

The Mid-Continent Oil & Gas Association has recently issued a Handbook on Unitization of Oil Pools that is very complete in its treatment of this subject and can be secured by writing to them at Tulsa.

The companies who have participated in the Orlando Pool are all well pleased with the results obtained and it is understood that the Prairie Oil & Gas Co. is now working on another pooling agreement between lease owners of land in a district to the north of the Orlando Pool where it will be necessary to explore considerable territory to develop the subsurface structure.

Late Fields

(Continued from Page 40)

City Pool for the seven days ending August 2, showing the number of barrels produced each day, number of wells on production, and total number of wells completed each day, were as follows:

Date—	Bbls.	Wells prod.	Wells comp.
July 29	99,751	35	378
July 30	112,861	42	379
July 31	140,826	50	382
August 1	123,061	47	383
August 2	120,456	38	386
August 3	137,998	53	389
August 4	110,127	47	391
August 5	116,849	48	394

Prairie Oil & Gas Co.'s No. 1 Dills, SE cor. NW Section 17-13-3w, a wildcat north of the Oklahoma City Pool, was believed to have the Wilcox sand at 6,800-16 feet, where it was filling up with water. It had a showing of gas at 6,600 feet, and sprayed gasoline for several days. Deeper drilling did not increase the showing.

Prairie Oil & Gas Co. and Tom Slick Oil Co.'s No. 4 Sigmon, SW cor. Section 32-11-2w, the most southeasterly well in the Oklahoma City Pool, made 4,500 bbls. the first 15½ hours, producing through a 1½-inch bean. The oil was found in Simpson sand at 6,485-6,632 feet. It extends production one location to the east.

Sinclair Oil & Gas Co.'s No. 13 Vencl, NW cor. SE SE Section 31-11-2w, was bailed in from a total depth of 6,639 feet in sand, and its gas flow was estimated at 200,000,000 feet. It was shut in without any gauges.

Tom Slick Oil Co. and others' No. 2 Baker, SW cor. NW NW Section 1-11-3w, in the north end of the Oklahoma City Pool, made 10,250 bbls. the first 19½ hours from Simpson sand at 6,400-44 feet. The gas flow was estimated at 70,000,000 feet.

KANSAS

The second dry hole was completed on the Raymond Townsite Monday, August 4. It was Brady and others' No. 1 Townsite, NW cor. NE SW, Section 27-20-10w, which had a hole full of sulphur water at 3,353-58 feet. The Schurr sand was found at 3,295-98 feet with a show of gas in the top and a hole full of water. The test was shut down and may be abandoned.

Simmons & Canary's No. 1 Bishop, NW cor. SW, Section 15-18-1w, a wildcat in McPherson County, had a showing of oil in the Viola lime at 3,238 feet, and was drilling in the lime at 3,270 feet with no increase.

Agate Oil & Gas Co.'s No. 1 Tague, in Section 20-29-4, Butler County, had the Silicious lime at 3,033-35 feet, where it filled up 1,700 feet with water. It is being abandoned at a total depth of 3,040 feet.

Phillips Petroleum Co. and Tom Palmer's No. 1 Harsch, NE cor. SE, Section 14-26-5w, a wildcat in Reno County, found a showing of oil at 3,240-50 feet and was drilling deeper.

Prairie Oil & Gas Co. has announced a new wildcat location in the southwestern part of Coffey County, and half a mile east of the Lyon County line. The test is No. 1 Hatch, NW cor. SE, Section 35-21-13.

Gus Hardendorf's No. 1 Persinger, C SE, Section 22-31-38w, Stevens County wildcat, extends the gas production in that area 8 miles north. The sand was found at 2,495 feet and it was still drilling in the gas formation at 2,520 feet, showing between 2,000,000 and 3,000,000 feet. The well extends gas production north within 4 miles of the Grant County line. The Hugoton gas field now extends approximately 50 miles north and south and 50 miles east and west.

Joe Liggett, Slick, Pryor & Lockhart and others' No. 1 Gunther, SE cor. NE NW, Section 29-26-7, Butler County wildcat, was estimated to be a 100-bbl. well. The oil was found at 2,784-93 feet in sandy lime. Oil first rose 2,000 feet in the hole in 12 hours. The location of the well is a quarter mile from an old well that was pumped for several years making about 30 bbls. a day.

GULF COAST MARKET UNCHANGED

HOUSTON, Tex., Aug. 5.—No change was indicated in Gulf Coast refinery markets the past week. The weakness of gasolines in North Texas at the opening of the week had not been reflected in the Gulf Coast market Tuesday when motor fuel for domestic tank car movement still was being maintained at a minimum of 7¼ cents. All products have continued steady in demand with an apparently firm price structure. From present indications there is nothing to cause any weakening in the immediate future nor on the other hand is there anything in sight which might result in an upward trend.

GAS EXPORT OPPOSED

CHATHAM, Ontario, Aug. 4.—Proposals to export natural gas from Alberta to the adjoining province of Saskatchewan are opposed by the cities of Calgary and Edmonton which have adopted resolutions urging the retention of Alberta gas for consumers in that province. The opposition is not so much to export of the surplus Turner Valley production as to the utilization of other fields which can be shut in and kept as reserves. On the other hand, operators in the Wainwright and other east central Alberta areas are endeavoring to obtain export markets for their gas production.

ELECTRIC-WELDED LINE PIPE NOW MANUFACTURED BY NATIONAL TUBE

By B. E. V. Luty

PITTSBURGH, Pa., Aug. 4.—National Tube Co., subsidiary of the United States Steel Corp., has begun the manufacture of electric welded line pipe, in its new department at the Christy Park works, near McKeesport, in the Pittsburgh district. The present manufacture is of 24-inch, on an order received some time ago. The department is equipped to make sizes 14-inch to 30-inch inclusive. A recent estimate was that production would be 4½ miles daily.

This is the second plant to make large diameter electric welded pipe, the first being that of the A. O. Smith Corp., Milwaukee, Wis., starting in September, 1927, and now prepared to make sizes up to and including 26-inch. The third will be the Youngstown Sheet & Tube Co.'s plant, now about completed. Republic Iron & Steel Co. has been making a large mileage of electric welded pipe in smaller diameters, for oil and gasoline lines, but not the largest sizes.

National's electric welding department is the third department it has put in operation this year to make large diameter line pipe, the two others having been seamless, one in Gary early in the year, the other in Lorain late in May. A third seamless tube mill is in process of erection in McKeesport. All three are designed for 24-inch and smaller.

Producers Well Booked

For two or three months all the pipe and tube producers have been fully booked on 10-inch and larger, for various distances ahead, National being well booked on 6-inch and larger. Its recent large order for gasoline lines makes it still more booked on the smaller sizes, this last order being from the Great Lakes Pipe Line Co., formed for the purpose of laying the gasoline lines by the Continental Oil Co. and the Barnsdall Corp. The order involves 1,400 miles of 8-inch, 6-inch and 4-inch, totaling about 75,000 tons.

There has been little demand for oil country goods generally for a long while, but with so much line pipe business the mills scarcely feel this. In the smaller sizes there is a poor demand. Seamless boiler tubes are decidedly slack compared with a year ago, mechanical tubing is not doing well, and standard pipe is barely holding to its volume of a few months ago. It is off probably 20 to 30 per cent from a year ago, and demand then was not altogether as heavy as three years earlier, 1926 having been the record year for production of standard pipe, which is chiefly butt-weld.

In the steel market as a whole there is no heavier buying than during July or late June, but a better sentiment is reported by almost all sellers, who say their customers hope to have heavier steel requirements in the near future.

Production Stationary

Production of steel was approximately stationary during July, the rate being estimated at a trifle above 55 per cent of total steel ingot producing capacity, the July rate being about two-thirds of the peak rate since the first of the year, which fell in February, and slightly under three-fourths of the average production during the first half of the year.

Predictions of improvement in steel demand, for late August or some time in September, seem to rest chiefly upon seasonal considerations as usually there is an increase after a dull summer. There is not much expectation in the steel trade that general business will improve much, except seasonally. In other words, it is believed that the depression still has some time to run.

Pipe prices are reported well maintained all along the line. Some of the other finished steel products are rather easy and irregular. Black sheets may now be quoted at 2.45 to 2.55 cents to represent the general market, against 2.55 cents flat previously reported, with some shading.

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NU-ALLOY

TO INVESTIGATE SPECIAL PHASES OF REFINING

(Continued from Page 142)

by the use of superheated steam in the distillation. After that, a vacuum tower will be installed for a study of low pressure flash vaporization of the residue.

Below are given the results from a run, a mixed base oil:

	Per cent
Gasoline (gravity 57.8 I.B.P.-119, E.P. 412)	25.5
Kerosene (gravity 42)	6.47
Gas oil (gravity 36.6)	22.15
Light lubricating oil distillate (gravity 31.7)	15.42
Medium lubricating oil distillate (gravity 27.0)	4.3
Heavy lubricating oil distillate (gravity 26.5, flash 500°F.)—82 viscosity at 210°F.	9.75
Residue	17.00

After the run was over, the residue was blown to 30 penetration asphalt and was utilized by the Utilities Department of the University for roofing purposes.

Oklahoma City Crude Oil

One of the new fields producing crude oil suitable for the manufacture of high grade lubricants is Oklahoma City, the derricks of which can be seen from the top of the fractionating tower of the University refinery.

Data from a run on Oklahoma City crude are given below:

	Gravity	Yield	Viscosity	Flash	Carbon Residue
Gasoline	58.4	32.1	.....	...	...
Kerosene	41.3	14.0	.....	...	...
Gas oil	33.9	20.5	.....	280	...
Light lube.	29.5	11.8	112@100	355	...
Medium lube.	25.5	6.1	176@130	435	...
Heavy lube.	24.6	4.9	85@210	470	1.15
Residue	17.8	10.0	648@210	...	...

The gasoline secured by the distillation had an initial of 108°F. and endpoint of 406°F. During this run, the top tower temperature varied between 260 and 264°F., the average transfer temperature (tube still outlet) was 790°F. The steam rate (total in tower) was about 20 pounds per barrel of crude oil.

In a subsequent run on Oklahoma City crude, the yields were somewhat of the order as given above, but toward the end of the run, the temperature was gradually increased until the transfer temperature read 820°F. Under these conditions a heavy lubricating oil stock of viscosity 140 at 210°F. was produced.

Increasing the superheated steam temperature to that of the oil, and increasing the thickness of insulating at the base of the tower, it is thought will make possible the production of these viscous distillate stocks without appreciable cracking in most cases.

In the erection and operation of our refinery, we are much indebted to the University Department of Utilities, of which Walter H. Kraft is head, for its interest and co-operation, as well as to numerous equipment concerns. We also are indebted to Prof. H. C. George, director of the School of Petroleum Engineering, for his constant help and encouragement.

IMPROVED CONDITIONS IN INDUSTRY SEEN

(Continued from Page 148)

ter of 1929. Net income for six months ended June 30, amounted to $1,521,280 after above charges, equal to $1.10 a share comparing with $3,635,055 or $2.63 a share in first half of previous year.

Standard of New York

Standard Oil Co. of New York declared regular quarterly dividend of 40 cents, payable September 15 to stock of record August 15.

Twenty Representative Stocks

The Oil and Gas Journal's weekly average price of 20 representative petroleum stocks listed on the New York Stock Exchange and New York Curb, based on closing quotations for Wednesday, was as follows:

Mar. 5	46.79	May 21	49.71
Mar. 12	48.30	May 28	50.98
Mar. 19	49.72	June 4	50.94
Mar. 26	51.00	June 11	46.65
Apr. 2	51.55	June 18	41.41
Apr. 9	53.26	June 25	42.37
Apr. 16	52.04	July 2	44.12
Apr. 23	53.39	July 9	44.11
Apr. 30	53.70	July 16	46.43
May 7	50.23	July 23	46.06
May 14	51.67	July 30	44.89

Memphis Natural Gas

Memphis Natural Gas Co.'s report for the first six months of 1930 shows a net increase in business of 107 per cent over the corresponding period of 1929. Gross revenues increased 81.5 per cent and sales of natural gas increased 86 per cent. Total gross revenues for the half year amounted to $827,087, against $455,624 for the same period of last year. Net earnings before interest, depreciation, federal income tax, etc., are $463,384, compared with $223,380 last year. Natural gas sales were 4,448,178,400 feet, as against 2,391,369,373 feet last year.

Standard of California

At a meeting of the board of directors of the Standard Oil Co. of California the regular dividend of 62½ cents a share was declared, payable on September 15, 1930, to stockholders of record August 15.

Dividend Action Deferred

The Ohio Oil Co. has decided to take no action on its common dividend until after the meeting of stockholders on August 14 to vote on a proposal to change the stock from $25 par to no par and to issue two shares of the new for each one of the old.

Pacific Western

The Pacific Western Oil Corp. and subsidiary report for the six months ended on June 30 net profit of $1,222,681 after all charges, including reserves for depreciation, depletion and abandonments, equivalent to earnings of $1.22 a share. This compares with net profit of $1,065,156 or $1.06 a share in the first half year of 1929.

Oil Shares, Inc.

The net asset value of the units of Oil Shares, Inc., was $52.12 as of June 30, according to the semiannual report. This compares with $55.57 on December 31, 1929. Profits, after expenses, were $170,336 for the period. Securities carried at a cost of $7,253,984 had a market value of $5,597,716 on June 30, a depreciation of $1,656,268.

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FURTHER DECREASE IN REFINERY RUNS

(Continued from Page 30)

At Allen, the White Oak Refining Co. is making improvements at its refinery to include facilities for the manufacture of steam refined stocks. Earl Petty, formerly of the Smith Engineering Co., has been placed in general charge of manufacturing for the company.

North and Central Texas

In North and Central Texas if it had not been for the decreases in runs at Magnolia Petroleum Co. plants, an increase in total runs would have been shown. The company has reduced runs materially at its two Fort Worth refineries and also at Corsicana. The same company also reduced the runs of its Luling refinery which is included in the West Texas group.

Kansas

Several Kansas refiners made substantial reductions in their runs in July and will continue that operating status in August. Every plant in Kansas which has been in operation during the past year is now operating.

West Texas

In West Texas, the Pyote plant of the Amarillo Producers & Refiners Corp. and Wickett plant of the Bluebonnett Refining Co., are shut down. These two plants were handling approximately 3,500 bbls. of crude oil daily. The same interests which control the Amarillo corporation are building a new plant in the Pampa area of the Texas Panhandle. It will be operated under the name of the Navajo Refining Co.

The Brownwood and Luling plants of the Central Texas Refining Co., have been purchased from the receiver by a new organization known as the Deer Oil Corp. of San Antonio. T. J. Mullin, president of the Cranfill-Reynolds Pipe Line Co., is chairman of the board and Victor H. Smith, president of the White Oak Refining Co., Tulsa, is president.

RUNS TO STILLS AT MID-CONTINENT REFINERIES

1928	
June 1	487,135
July 1	506,310
August 1	543,625
September 1	563,270
October 1	547,820
November 1	550,000
December 1	520,000
1929	
January 1	508,550
February 1	506,800
March 1	514,950
April 1	530,530
May 1	577,500
June 1	585,030
July 1	565,800
August 1	555,250
September 1	552,300
October 1	544,720
November 1	545,473
December 1	540,630
1930	
January 1	535,460
February 1	519,355
March 1	531,500
April 1	555,250
May 1	574,300
June 1	572,250
July 1	548,475
August 1	531,400

K. C. Woodruff, formerly connected with the Gulf States Terminal & Transport Co., is vice president and general manager of the company. The new owners do not contemplate any changes in the plants at this time.

No important changes were reported in the operations of the North Louisiana and Arkansas plants.

REFINERY OPERATIONS IN OKLAHOMA
(Plants which have been in operation during the past year)

	Daily capacity	Runs Aug. 1	Runs July 1
Anderson-Prichard Oil Co., Cyril	5,000	4,500	4,500
Barnsdall Refineries, Inc., Barnsdall	6,000	3,500	3,800
Barnsdall Refineries, Inc., Okmulgee	10,000	3,500	4,000
Bell Oil & Gas Co., Grandfield	4,500	1,500	1,600
Black Gold Refining Co., Oklahoma City	1,500	750	(†)
Champlin Refining Co., Enid	16,000	13,000	12,000
Citizens Refining Co., Seminole	1,000	(*)	(*)
Continental Oil Co., Sapulpa	10,000	1,500	2,000
Continental Oil Co., Ponca City	30,000	18,000	19,000
Cushing Refining & Gasoline Co., Blackwell	1,800	1,500	1,500
Cushing Refining & Gasoline Co., Cushing	3,500	3,000	3,000
Deep Rock Oil Corp. (Shaffer), Cushing	10,000	10,000	10,000
Eason Oil Co., Enid	5,000	3,500	3,500
Electrol Refining Co., Oklahoma City	3,000	(*)	(*)
Empire Oil & Refining Co., Cushing	5,000	4,200	4,200
Empire Oil & Refining Co., Okmulgee	4,000	4,000	4,000
Empire Oil & Refining Co., Ponca City	8,000	8,000	8,000
Garber Refineries, Inc., and Omar Refining Co., Garber	3,500	2,600	2,700
Globe Oil & Refining Co., Blackwell	7,500	6,000	6,000
Globe Oil & Refining Co., Cushing	15,000	6,000	6,000
Illinois Oil Co., Cushing	3,000	(*)	(*)
Imperial Refining Co., Ardmore	5,000	3,000	3,000
Independent Oil & Gas Co., Okmulgee	5,000	3,300	3,300
Johnson Oil Refining Co., Cleveland	6,000	6,000	5,000
Mid-Continent Petroleum Corp., West Tulsa	40,000	20,000	18,000
Northwestern Refining Co., Tonkawa	3,000	(*)	(*)
Peppers Gasoline Co., Covington	1,000	700	725
Producers Oil Co., Bristow	2,500	1,300	1,500
Producers & Refiners Corp., West Tulsa	6,000	4,000	4,200
Pure Oil Co., Ardmore	5,000	2,000	2,000
Pure Oil Co., Muskogee	9,000	6,000	8,000
Remington Oil Co., Wewoka	2,000	(*)	(*)
Rock Island Refining Co., Beckett	3,500	3,500	3,500
Sinclair Refining Co., Muskogee	1,000	700	800
Sinclair Refining Co. (Pierce) Sand Springs	8,000	5,000	5,000
Sun Oil Co., Yale	5,000	5,000	5,000
Sunray Oil Co., Allen	3,000	2,400	2,300
The Texas Company, West Tulsa	15,000	15,000	15,000
Texas Pacific Coal & Oil Co., Wynnewood	2,500	1,800	1,800
Tidal Refining Co., Drumright	15,000	12,000	12,000
Transcontinental Oil Co., Boynton	2,500	2,000	2,000
Transcontinental Oil Co., Bristow	5,000	3,500	3,500
Western Oil Corp., Beckett	2,000	1,500	1,500
White Oak Refining Co., Allen	8,000	2,500	4,000
Wilcox Oil & Gas Co., Bristow	5,000	3,000	4,000
Wirt Franklin Petroleum Corp., Ardmore	4,000	2,200	3,400
Yale Oil Corp., Yale	1,000	900	1,000
Total	318,300	202,350	206,325

*Shut down. †Under construction.

REFINERY OPERATIONS IN ARKANSAS
(Plants which have been on operation during the past year)

	Daily capacity	Runs Aug. 1	Runs July 1
James H. Berry & Sons, Waterloo	2,000	1,200	1,200
Henry H. Cross Co., Smackover	6,000	4,000	4,000
Houston Oil Co., Camden	3,500	2,000	3,500
Kettle Creek Refining Co., Pearson	5,000	1,500	1,600
Lion Oil & Refining Co., El Dorado	12,000	7,000	5,500
Macmillan Petroleum Products Co., El Dorado	1,800	1,550	1,550
Ouachita Valley Refining Co., El Dorado	2,000	850	750
Root Refining Co., El Dorado	10,000	6,300	6,000
Simms Oil Co., Smackover	3,000	2,000	2,000
Total	45,300	26,400	26,100

REFINERY OPERATIONS IN NORTH CENTRAL TEXAS
(Plants which have been on operation during the past year)

	Daily capacity	Runs Aug. 1	Runs July 1
American Refining Properties, Wichita Falls	5,000	3,000	3,000
Archer Refining Co., Megargel	2,000	500	500
Central Texas Refining Co., Angus	4,000	1,000	1,200
Central Texas Refining Co., Minerva	2,000	800	500
Continental Oil Co., Wichita Falls	6,000	4,000	3,300
Dale Oil & Refining Co., Electra	4,000	3,600	3,400
Empire Oil & Refining Co., Gainesville	5,000	3,600	3,600
Falls Refining Co., Wichita Falls	2,000	1,000	1,000
Gulf Refining Co., Fort Worth	10,000	6,000	6,000
Humble Oil & Refining Co., Breckenridge	2,000	1,400	1,300
Humble Oil & Refining Co., Chilton	4,000	1,400	1,650
Humble Oil & Refining Co., Neches	5,000	2,500	2,000
Iowa Park Producing & Refining Co., Iowa Park	2,500	1,000	1,200
LaSalle Petroleum Co., Burkburnett (Noble)	3,500	1,000	1,000
Macmillan Petroleum Co., Isom	8,000	5,800	6,000
Magnolia Petroleum Co., Fort Worth	12,000	3,000	6,000
Magnolia Petroleum Co. (White Eagle Plant) Fort Worth	6,000	2,200	2,500
Magnolia Petroleum Co., Corsicana	5,000	3,800	5,000
Olney Oil & Refining Co., Olney	2,500	2,000	1,600
Oriental Oil Co., Dallas	5,000	3,000	3,300
Orient Petroleum Co., Wichita Falls	2,500	1,000	850
Panhandle Refining Co., Wichita Falls	5,000	3,600	3,300
Petroleum Refractionating Co., Pampa	5,000	5,300	3,000
Phillips Petroleum Co., Isom	15,000	11,000	11,000
Primrose Refining Co., Wichita Falls	2,500	1,500	1,800
Simms Oil Co., Dallas	5,000	3,000	2,850
Star Refining & Producing Co., Fort Worth	1,800	500	500
Superior Refining Co., Tiffin	2,000	(*)	(*)
Tarrant Refining Co., Grand Prairie	2,500	(*)	(*)
Taxman Refining Co., Wichita Falls	2,500	2,500	2,200
The Texas Company, Dallas	16,000	16,000	16,000
The Texas Company, Amarillo	4,000	3,500	3,500
Tidal Western Refining Co., Burkburnett	3,000	2,000	2,000
Texas Pacific Coal & Oil Co., Fort Worth	3,000	1,800	1,800
Texas Pacific Coal & Oil Co., Caddo	1,200	800	800
Transcontinental Oil Co., Fort Worth	5,000	3,500	4,000
Waggoner Refining Co., Electra	3,400	2,500	2,500
Wilcox Oil & Gas Co., (Pampa Refining Co.) Pampa	4,000	2,700	3,000
Total	179,900	111,800	112,150

*Shut down.

REFINERY OPERATIONS IN KANSAS
(Plants which have been on operation during the past year)

	Daily capacity	Runs Aug. 1	Runs July 1
Barnsdall Refineries, Inc., Wichita	4,000	2,000	2,000
Derby Oil Co., Wichita	6,000	4,500	4,750
Eldorado Refining Co., Eldorado	3,500	3,000	3,000
Golden Rule Refining Co., Wichita	1,500	900	1,000
Kanotex Refining Co., Arkansas City	10,000	2,500	2,000
Independent Oil & Gas Co., Kansas City	6,000	5,000	5,000
National Refining Co., Coffeyville	6,500	4,500	4,500
Peerless Oil Refining Co., Chanute	3,000	1,800	1,800
Shell Petroleum Corp., Arkansas City	22,000	15,000	17,000
Sinclair Refining Co., Coffeyville	12,000	8,000	8,500
Sinclair Refining Co., Argentine	9,500	5,000	5,000
Skelly Oil Co., Eldorado	23,000	13,400	13,400
Standard Oil Co. of Kansas, Neodesha	20,000	10,000	10,000
Vickers Petroleum Co., Potwin	3,500	2,500	2,300
White Eagle Oil Corp., Augusta	10,000	10,000	9,000
Total	140,500	88,100	89,250

REFINERY OPERATIONS IN WEST TEXAS
(Plants which have been on operation during the past year)

	Daily capacity	Runs Aug. 1	Runs July 1
Amarillo Producers & Refiners Corp., Pyote	3,000	(*)	1,500
Big Spring Refining Co., Big Spring	2,500	1,500	1,100
Big Lake Refining Co., Big Lake	2,000	(*)	(*)
Bluebonnett Oil Refining Co., Wickett	5,000	(*)	2,000
Burford Oil Co., Pecos City	6,000	4,900	5,500
Coltex Refining Co., Colorado	10,000	6,200	6,000
Cosden Oil Co., Big Spring	15,000	8,500	9,000
Deer Oil Corp., Brownwood	2,000	400	600
Deer Oil Corp., Luling	2,500	600	1,800
Del Rio Refining Co., Del Rio	5,000	2,200	2,800
Grayburg Oil Co., San Antonio	6,000	1,650	3,000
Great West Refining Co., Big Spring	8,500	2,700	3,000
Gulf Oil & Refining Co., Sweetwater	5,000	5,000	5,000
Humble Oil & Refining Co., San Antonio	5,000	1,900	2,350
Humble Oil & Refining Co., McCamey	15,000	9,900	10,000
Magnolia Petroleum Co., Luling	3,000	1,300	2,500
Misko Refineries, Inc., Laredo	1,500	500	500
Mid-Tex Refining Co., Midland	2,500	(*)	(*)
Pasotex Petroleum Co., El Paso	10,800	9,000	9,000
Pecos Valley Refining Co., Pyote	8,500	(*)	(*)
Pioneer Oil & Refining Co., Somerset	1,500	900	900
Richardson Refining Co., Big Spring	6,000	4,000	4,000
Rio Grande Oil Co., El Paso	6,000	2,000	2,500
San Angelo Refining Co., San Angelo	2,000	200	300
Sweetwater Oil & Refining Co., Sweetwater	2,000	200	200
The Texas Company, San Antonio	3,000	3,000	3,000
The Texas Company, El Paso	1,500	1,200	1,200
Tonkawa Petroleum Co., Pyote	5,000	1,500	1,500
Texas Mexican Oil & Refining Co., Laredo	1,000	300	300
Texas Petroleum Products Co., Somerset	1,500	900	900
Wickett Refining Co., Wickett	2,500	200	(*)
Total	150,800	70,250	80,450

*Shut down.

REFINERY OPERATIONS IN NORTH LOUISIANA
(Plants which have been on operation during the past year)

	Daily capacity	Runs Aug. 1	Runs July 1
Bayou State Refining Co., Hosston	750	500	400
Crystal Oil Refining Corp., Shreveport	14,000	(*)	(*)
Dixie Oil Co., Superior	3,500	2,800	3,200
Louisiana Oil Refining Co., Shreveport, Bossier	24,000	17,000	17,600
Shreveport-El Dorado Pipe Line Co., Shreveport	10,000	7,200	5,000
The Texas Company, Shreveport	7,000	5,000	5,000
Total	59,250	32,500	34,200

*Shut down.

FINDS NO OIL IN NICARAGUA

MANAGUA, Nicaragua, Aug. 4.—Howland Bancroft, representative of the Pan-American Petroleum Co., a subsidiary of the Standard Oil Co. of Indiana, who obtained an option on the Hurtado oil concession last October, possessing the right to drill on the western side of Nicaragua, has written a letter to President Moncada, stating that oil does not exist there. Much interest was shown in the search for oil last March when Mr. Bancroft said his company was making extensive investigations in Nicaragua to determine if oil existed in marketable quantities. Geological investigation was conducted by groups of experts under the supervision of a widely known geologist.

NORTHEAST EDGE OF VAN FIELD IS DEFINED BY PURE OIL CO.'S WELL

By L. E. Bredberg
Fort Worth Bureau, The Oil and Gas Journal

FORT WORTH, Tex., Aug. 4.—The northeast edge of the Van Field, Van Zandt County, is now definitely defined by the Pure Oil Co.'s No. 1 Crim in the Crim 48.5-acre tract, approximately 1 mile northwest of the discovery well. This test was abandoned at a total depth of 3,594 feet, and marks the second dry hole for the Van Field, the Humble Oil & Refining Co. completing the first dry hole on the Freeman farm, east of the present producers, and defining the pool in that direction.

While the northwest edge of the field was being defined, the northeast side of the field was being extended, and by one of the best wells yet completed in this area. This well belongs to The Texas Company and is located in the southwest corner of the G. W. Carter 171-acre tract in the William Daniel Survey, an east offset to the Humble Oil & Refining Co.'s No. 1 Carroll which was the first well to extend the field in this direction and to such an extent. The Imperator Oil Co.'s test between the two wells, located on a narrow strip which extends the full length of the farm from north to south, is still held up with a rig only half complete standing on the location.

The Texas Company's No. 1 Carter, referred to, topped the Woodbine sand at 2,870 feet and the hole was bottomed at 2,938 feet, the well flowing an estimated 1,000 bbls. of oil per hour for the first four hours, the oil going into the slush pit, through 2½-inch tubing. It is estimated as about the same caliber well as the Humble well to the west which is producing around 110 bbls. per day through a three-thirty-second-inch choke. The Texas Company has two 500-bbl. storage tanks erected and is building two more to take care of the production until the connecting line from the Van Field to the Humble well on the west, can be connected to this well. There is 450,000 feet of gas in this well, and the gas and oil production proves up much more surrounding acreage for production and running the field to the east, to what distance no one knows. The Imperator Oil Co. drilled a dry hole 2,800 feet due north of this new well, consequently production cannot run past that deep test in that direction, and other tests in this immediate area will no doubt be drilled with the intention of seeking production to east instead of the north.

The serious situation from lack of water for production purposes has been overcome by the laying of a water line to a well southeast of the pool, and activities in the Van Pool have been resumed although no new locations were reported. Four wells were completed in the pool, and one well had pumping equipment installed. This is on the J. N. Leonard 47.5-acre tract to the north of the discovery well.

With the discovery of a new well a short distance across the line in Arkansas, near the town of Texarkana, leasing activity is expected throughout the eastern tier of Texas counties again, and other wildcats in these counties probably will be drilled in quest of the pay which was found in the discovery across the line.

McElreath and Suggett and Rowan Drilling Co.'s No. 1 Gilliam in the J. C. Robertson Survey, about 7 miles southeast of the Van Field in Smith County is now drilling ahead at 3,560 feet with top of the Pecan Gap chalk logged at 3,450 feet, showing that the test is running about normal. This is one of the most interesting tests in the East Texas district at the present time, and has set a record in drilling in the last 18 days' time.

The Imperator Oil Co.'s No. 1 G. J. Luther to the extreme north of the Van Field, Van Zandt County, is now shut down at 2,500 feet. This test will mean the extension of production 6,000 feet farther north if it proves a commercial producer.

East Central Texas Production

Daily average production of the pools in the East Central Texas area for the week ending August 2 follows:

EAST CENTRAL TEXAS

Boggy Creek	3,700
Cedar Creek	60
Currie	270
Hill County	35
Mexia	4,292
Minerva	560
Nigger Creek	210
Powell	5,584
Richland	195
Thrall	40
Van	26,184
Wortham	830
Total	41,960
Week ending July 26	40,264
Increase	1,696

COMPLETIONS IN EAST CENTRAL TEXAS

Titus County

Deep Rock Oil Co.'s No. 1 First National Bank, top of Pecan Gap 2,406 feet, top of Woodbine sand 4,264 feet; dry and abandoned; total depth 4,538 feet.

Van Zandt County

Pure Oil Co.'s No. 2 J. C. Stewart, initial production 163 bbls.; total depth 2,934 feet. Sun Oil Co.'s No. 4 I. W. Thompson, initial production 390 bbls.; total depth 2,965 feet. Pure Oil Co.'s No. 8 R. L. Wells, initial production 190 bbls.; total depth 2,934 feet. The Texas Company's No. 2 R. A. Tunnell, initial production 471 bbls.; total depth 2,946 feet.

EAST CENTRAL TEXAS WILDCATS

Week Ending August 4

DELTA COUNTY

C. A. Everts' No. 1 Smith, 300 ft. N and 150 ft. W of 38-ac. tract, 3 miles NE of Cooper in J. U. Ranfro Sur. ..... Shut down 978 ft.

FANNIN COUNTY

North American Pet. Co.'s No. 1 Allen, 700 ft. N and 150 ft. W in N. R. Broadfoot Sur., 9 miles N of Honeygrove ..... Shut down 977 ft.

E. M. Rogers' No. 1 McSwain, 300 ft. S and E of Michael Daly Sur., in Juana Telgando Sur., 1½ miles NE of Lomasco ..... Shut down 1,350 ft.

HENDERSON COUNTY

H. E. Ashburn et al's No. 1 T. E. Barry, center of Barry's 59-acre tract in A. York Sur. ..... Shut down 2,510 ft.

L. G. Bradstreet's No. 1 Julia J. Shaunessy, 2,776 ft. from N and 300 ft. from W of Sur. or farm, John Isard Sur. ..... Drlg. 1,410 ft.

Chapman's No. 1 Cade, 1,662 ft. from N and 3,294 ft. from W of J. B. Dorsey Sur. ..... Drlg. 3,818 ft.; top Austin 3,710 ft.

Cranfill & Germany's No. 1 Clara C. Stow, 2,203 ft. from N and 471 ft. from S of Guadalupe Acosta Sur. ..... Pecan Gas chalk 2,618-2,770 ft.; shut down 3,683 ft.

George Pace et al's No. 1 Mrs. Sarah Anthony, 273 ft. N and 132 ft. W of SE cor. of S. Anthony 632-ac. tract, Jose W. Battvan Sur. ..... Rig up.

Sunray Oil Co.'s No. 1 Davis, 600 ft. S and W of most easterly NE cor. of 164-ac. tract, Eldridge Harris Sur. ..... Drlg. 707 ft.

HUNT COUNTY

Branson et al's No. 1 West, 350 ft. N, 350 ft. W of W 60-ac. tract, Jas. Rooces Sur. ..... Shut down 2,910 ft.

KAUFMAN COUNTY

Shaw & Alexander's No. 1 Barrow, 2,360 ft. S and 200 ft. W of R. A. Terrell Sur., 4½ miles N of McCoy ..... Drlg. 870 ft.

LAMAR COUNTY

Everett & Allen's No. 1 Guest, 250 ft. S and 2,046 ft. E of 100 -ac. tract, L. Roberts Sur. ..... Spudded and shut down.

NAVARRO COUNTY

Killam & Phillips' No. 1 Wilson, 150 ft. S and E of 62½-ac. tract in Wm. Bridges Sur. ..... Shut down 2,007 ft.

Navarro Oil Co.'s No. 2 Mathews, 3,600 ft. from S and 1,140 ft. from W of Smith Sur., 3 miles E of Dawson ..... Shut down 1,493 ft.

Young et al's No. 1 Farmer, 700 ft. from S and 400 ft. from E of 110-ac. farm in F. Finley Sur. ..... Shut down 960 ft.

RAINS COUNTY

Everett & Morrison's No. 1 Franklin, 640 ft. from S and E of 75-ac. tract in John Christian Sur., 6 miles SE of Emory ..... Spudded and shut down.

Owens & Sloan's No. 1 Hill, 150 ft. out of NW cor. of 150-ac. tract, T. McMahon Sur. ..... Shut down 4,437 ft.

RUSK COUNTY

Clem S. Clark's No. 1 Maude R. McCaffiin, 427 ft. from N, 166 ft. from W of farm, Ellie Blackburn Sur. ..... Location.

Mass et al's No. 1 Mathews, 2,244 ft. from N, 4,356 ft. from E, Dalines Cartinas Sur. ..... Shut down 2,338 ft.

SMITH COUNTY

McElreath & Suggett's No. 1 J. Gilliam, 200 ft. from N and 200 ft. from W of Gilliam 78-acre tract, J. C. Robertson Sur. ..... Drlg. 3,508 ft.; top Pecan Gap 3,450 ft.

Owens & Sloan Oil Co.'s No. 1 Starnes, 846 ft. along W lines of John Waller Sur. from NE cor. of J. O. Dillard Sur., and 80 ft. E at right angles to W line of J. Waller Sur. ..... Shut down 1,600 ft.; repairs.

Sutton et al's No. 1 W. D. Hammond, 150 ft. out of SW cor. W. D. Hammond tract in Jas. Reed Sur. ..... Shut down 4,265 ft.

Winona O. & G. Co.'s No. 1 Freeman, 150 ft. from S, W of 89-ac. tract in A. J. Lagrone Sur., 4 miles SE of Winona ..... Shut down 2,730 ft.; top Taylor 2,666 ft.

VAN ZANDT COUNTY

Anderson's No. 1 Sanger, 150 ft. from N and W of Humble Sanger lease in John Walling Sur. ..... Derrick; rig up; spudding.

L. R. Barton's No. 1 Wamble, 300 ft. from S and W of 100-ac. tract in Pleasant Young Sur. ..... Derrick.

Broderick & Calvert's No. 1 M. F. Shirley, 150 ft. from W in C of N and S lines of 2.1-acre strip, John Walling Sur. ..... Derrick.

E. L. Chapman's No. 1 Charles Wolverton, 215 ft. from N, 60 ft. S of NE cor. of Wolverton 10-ac. tract, William James Sur. ..... Drlg. 3,035 ft.

T. Daniels' No. 1 Fannie Cumbine, 185 ft. S and 175 ft. E of NW cor. 156-ac. tract, John Wright Sur. ..... Shut down 2,375 ft.

Dennis Oil Co.'s No. 1 C. W. Morris, 100 ft. from N and 300 ft. from E lines of Morris 160-ac. tract in C. L. Morris Sur., 5 miles SE of Ben Wheeler ..... T. D. 3,071 ft.; will abandon.

Hartt Oil Oil Co.'s No. 1 Dr. L. M. Cox in A. C. Night Sur., 1,785 ft. N of S line and 524 ft. E of W line .... Derrick.

H. Helms et al's No. 1 Bogue, 647 ft. W and 155 ft. S of SE cor. of J. M. Brown 70-ac. in Marshall University Sur., SE of Van ..... Derrick.

B. P. Hervey's No. 1 Foster & Smith, 150 ft. S and 150 ft. W of 104-ac. tract, Margaret Neal Sur. ..... Drlg. 3,678 ft.

Howard & Dooley's No. 1 Elliott 188-ac. tract in W. H. Bundy Sur. ..... Derrick.

Humble Oil & Ref. Co.'s No. 1 Ruth S. Blake, 640 ft. S line of most southerly SE cor. and 250 ft. E line of 201.4-ac. tract, John Walling Sur. ..... Location.

Imperator Oil Co.'s No. 1 G. J. Luther, in SW cor. G. J. Luther 32-ac. tract ..... Shut down 2,500 ft.

Ray Jenkins et al's No. 1 U. F. Davis, 980 ft. N, 160 ft. N of NE cor. of A. F. Magers 338-ac. tract, Nacogdoches School Land Sur. ..... Building derrick.

Kraft & Kelsey's No. 1 Enas in vacancy strip on E side of Sam Allen and Wylie Enas farms in J. Prado Sur. Rigging up.

Jenkins et al's No. 1 V. T. Davis, SE cor. of 139.8-ac. tract, Nacogdoches County School Land ..... Derrick.

Imperator Oil Co.'s No. 2 G. W. Carter, 175 ft. from S and 35 ft. from W of G. W. Carter 171-ac. tract, William Daniel Sur. ..... Derrick.

Priest et al's No. 1 Blewitt, 175 ft. NW and SW of SE cor. of NW 84-ac. tract, E. Porter Sur. ..... Drlg. 2,270 ft.

Pure Oil Co.'s No. 1 Davis, 127 ft. from S and 200 ft. from W of 139-ac. tract, Nacogdoches County School Land ..... Derrick completed.

Pure Oil Co.'s No. 1 W. F. Swain, 220 ft. from W line and 250 ft. from N line 48-ac. tract, John Walling Sur. ..... Drlg 2,870 ft.

Pure Oil Co.'s No. 1 J. R. Shivers, 225 ft. W of E line, and 200 ft. S of N line of lease, John Walling Sur. ... Drlg. 2,330 ft.

Pure Oil Co.'s No. 1 M. L. McMahon 48 acres, 150 ft. E of W line, 150 ft. S of N line of lease, John Walling Sur. ..... Rigging up.

L. B. Pruitt et al's No. 1 T. J. Luther, 50 ft. E. 170 ft. from N of SW cor. of T. J. Luther 32-acre tract, M. Gross Sur. ..... Drlg. 2,100 ft.

Texas Chief Oil Co.'s No. 1 Foster, 600 ft. E of W line and 600 ft. N of S line of W. P. Foster's 151-ac. tract in F. Montgomery Sur., 7 miles south of Canton ..... Shut down 1,337 ft.

The Texas Company's No. 1 Carter, SW cor. of G. W. Carter 171-acr. tract in William Daniel Sur. ..... Top Woodbine 2,870 ft.; T. D. 2,938 ft.; flowed 1,000 bbls. an hour for four hours through 2½-in. tubing in pit.

The Texas Company's No. 1 W. H. White, 225 ft. E of W line and 748 ft. from N line 20-ac. tract, John Walling Sur. ..... Coring 2,890 ft.

Van Zandt Oil & Dev. Co.'s No. 1 Robinson, located NE cor. of L'Barbo Sur., 4 miles E of Grand Saline ..... Shut down 4,460 ft.

WOOD COUNTY

Big Indian Oil Co.'s No. 1 R. J. King, 450 ft. W of E line and 150 ft. N of S line of King's 100-ac. tract in Wm. Barnhill Sur. ..... Shut down 4,569 ft.; Woodbine sand 4,569 ft.

WICHITA FALLS FORMS CHAPTER OF THE A.P.I.

A chapter of the American Petroleum Institute, production division has been organized at Wichita Falls, Tex. Frank M. Stauffer was elected chairman for the coming year; C. B. Clement, secretary and treasurer, and R. P. Brouthertton, W. K. Campbell, R. H. Washburn, Joe H. Cable and W. B. Nicholson as members of the advisory committee.

C. A. Young, national executive secretary; J. R. McWilliams, national organization committee chairman and Stanley Durward, division secretary of the southwest division, American Petroleum Institute, were present at the organization meeting and talked on the value of a local chapter to an area.

John Schroeder, superintendent of the Bell Oil & Gas Co. gave a very interesting paper on unit repressuring in the Red River bed pool in Tillman County, Oklahoma, and Wichita County, Texas.

The next monthly meeting of the local organization will be held in the Wichita clubroom at 8 p. m., August 26.

D. W. McKAY BACK WITH COOPER-BESSEMER CORP.

D. W. McKay, whose first job was with the old C. & G. Cooper Co. in Mount Vernon, Ohio, and whose entire adult life has been spent in work connected with the manufacture and sale of engines, is back with the organization in which he started 27 years ago, this time with the

D. W. McKay

Tulsa office of the Cooper-Bessemer Corp., in the sale of vertical engines.

Mr. McKay, who was born in Mount Vernon, learned the machinist's trade on steam engines in the C. & G. Cooper plant there. Later he was employed in installing engines sold by the company. In 1917 he joined the Hope Engineering Co. of Mount Vernon and was sent to Tulsa as construction superintendent in the building of gas pumping stations and gasoline plants. Six years later he was made manager of Hope's Tulsa office, in charge of engine sales and engineering contracts.

In 1928, when the Hope company sold its engine plant and business to the Cooper company, Mr. McKay continued to conduct the Hope's Tulsa office, which served as sales representative for the other company. With Mr. McKay's return to the Cooper organization, which through a merger has become the Cooper-Bessemer Corp., that company will conduct its own sales staff in the Tulsa district, which includes Oklahoma and Kansas.

NATURAL GASOLINES CONTINUE ADVANCE

(Continued from Page 28)

come largely from areas outside the Mid-Continent.

It will be noted in the table that while crude oil runs to stills were less than in June of last year, gasoline production was substantially greater in June of this year. This also is in line with the general trend in United States and points to the condition which is directly responsible for the weak gasoline market. A large number of refiners in all parts of the country have not increased their crude runs to stills this year and in many cases have run less crude, but at the same time their gasoline output has increased due to the expansion in cracking facilities or the greater use of natural gasoline or both. The failure to appreciate the general significance of this increased yield of gasoline per barrel of crude oil this year, as in the past was responsible for the continuance of excess supplies. A recent investigation showed that the increase in the production of cracked and natural gasoline so far this year would have taken care of the increase in demand and a healthy market situation could have been maintained if this plan of operations had been carried out.

Mid-Continent refiners are endeavoring to correct the kerosene market situation in which prices have dropped to the lowest point in several years through a curtailment of output and there is reason to believe that with a return to more normal conditions in regard to export demand, it will be one of the first products to recover.

As a group the Mid-Continent operators reduced their kerosene output from 1,207,000 bbls. in May to 1,075,000 bbls. in June. The June total compares with 1,231,000 bbls. in June of last year. The product is still not in a strong position statistically as stocks on June 30 totaled 1,035,000 bbls. or 23 per cent greater than on the same date last year. Failure to reduce output in line with a demand which has not been normal since last fall has resulted in excess accumulations of kerosene in practically all areas and improvement in markets is dependent on an excess of demand over supply until the distress inventories are liquidated.

The fuel oil and gas oil situation as revealed by the government report is similar to that of kerosene and the same remedy is being applied. The output of these products dropped from 7,137,000 bbls. in May to 5,269,000 bbls. in June. In June of last year the output totaled 7,143,000 bbls.

The trend in fuel oil and gas oil output in the Mid-Continent for several years has been toward decreased yields. Unfortunately the demand has shown the same trend. This year the situation has been particularly critical due to the decline in the industrial consumption plus additional competition from natural gas. Despite the large reduction in output in June, stocks of fuel oil and gas oil increased approximately 300,000 bbls.

For the entire Mid-Continent fuel oil and gas oil stocks on June 30 were less than on the same date of the previous year, the decrease being particularly large in Arkansas and North Louisiana. These products are also in a position statistically to improve with a continuance of curtailment in plant operations and an improved industrial demand.

Gasoline and Naphtha

Two refiners in Oklahoma who have been selling at 6½ cents to their regular customers reduced their price on the regular grade of U. S. Motor gasoline to 6¾ cents. This was not done for the purpose of stimulating the spot demand as reductions to 6 cents or less are necessary where companies are endeavoring to share in the elusive spot market where bargain hunting buyers are still in control.

Oklahoma refiners are still shut out of a large part of the Middle West territory, east of the Mississippi River where local refiners continue to quote delivered prices which net from 5 to 5½ cents basis Group 3. In the Group, which includes all of Oklahoma and part of Kansas specification U. S. Motor gasoline is available at 5¾ cents with reports of resales and direct to the trade under these prices.

There is no apparent change in the high gravity situation. Although reports of inquiries for export material are heard from day to day a check of the large buyers in Oklahoma on Monday failed to show any actual business placed. Some refiners particularly in the North Texas area will have their normal movement of 375 or 390 endpoint gasoline in August on long-time contracts. Independent export buyers are said to have purchased small quantities last week.

Kerosene

The 41-43 water white kerosene sold as low as 3 cents in Oklahoma last week and lower in North Texas. A price range of 3⅛ to 3¾ cents covers the general movement. Several refiners state that their kerosene movement to regular buyers will be greater in August than in July.

Fuel Oil and Gas Oil

There are more inquiries for fuel oil in Oklahoma. Sellers state that the prices offered are generally too low, especially when the shipment is to be made to Middle Western points. Oklahoma refiners generally are refusing to give additional concessions in prices and the market appears to be pegged at present levels.

Outside the general market there is considerable business for special grades of fuels including products which come within the gas oil and distillate specifications. Low cold test grades are in greatest demand. These products are for special uses including burning fuels for homes, apartment houses, office buildings, etc.

Lubricants

The motor oil market is unsettled. General market prices on motor oils are not published even in normal times for prices vary widely due to the differences in specifications.

Recently these products have been quoted over even wider price ranges. A few sellers instead of reducing their neutral oils or bright stocks are compounding the finished motor oils and taking whatever prices are necessary to get the business from jobbers.

It is conceded that these low prices are a threat to the continued stability of the retail market where many large distributors have built up a demand for oils selling at 30 to 40 cents a quart. Many of the "tank car" retail stations which are selling gasoline under the market are also offering bargains in motor oils.

More inquiries for wax are being received. The price range is unchanged.

BUREAU OF MINES REPORT FOR JUNE

Crude Petroleum

According to reports received by the Bureau of Mines, Department of Commerce, the production of crude petroleum in the United States during June, 1930, amounted to 76,513,000 bbls., a daily average of 2,550,000 bbls. This represents a decline in daily average from May of 36,000 bbls. and from June, 1929, of 230,000 bbls.

The major portion of the decline in production took place in Oklahoma, where every major producing area except the Seminole district reported a decrease in daily output in June. Production in California showed a decline of 13,000 bbls. daily; the major portion of this occurred in the Santa Fe Springs Field. Texas, the leading producing State, showed a small increase in output in June. Production in West Texas fell off but this was more than compensated for by gains in the remainder of the State, or in such fields as Salt Flat and Chapman (Thrall). Due to developments in the Hobbs Field, production in the New Mexico field increased materially in June, when the State produced 733,000 bbls. of petroleum as compared with 86,000 bbls. for June, 1929.

Stocks of crude petroleum, both in California and east of California, again declined in June. East of California the decrease amounted to over 1,000,000 bbls.; in California, to over 2,000,000 bbls. These decreases undoubtedly reflected the successful efforts attending the attempt to curtail crude production to conform to refinery demands.

Although stocks of fuel oil continued to accumulate, heavy withdrawals from crude and gasoline storage resulted in a material decline in stocks of all oils in June. These stocks fell off 3,384,000 bbls. as contrasted with an increase of 1,674,000 bbls. in May.

Refined Products

Runs to stills of crude petroleum during June totaled 80,747,000 bbls. This represents a decline of 6,000 bbls. in daily average from the previous month, all of which was in runs of foreign crude.

Daily average motor fuel production amounted to 1,251,000 bbls. as compared with a daily output of 1,267,000 bbls. in May. Daily average exports of gasoline rose to a new high level of 238,000 bbls The daily average indicated domestic demand for motor fuel amounted to 1,197,000 bbls., an increase over the previous month of 20,000 bbls. and over June, 1929, of 79,000 bbls., or 7 per cent. Stocks of motor fuel as of June 30, 1930, amounted to 50,225,000 bbls., a decline from the previous month of 3,821,000 bbls. At the current rate of total demand, these stocks represent 35 days' supply as compared with 40 days' supply on hand a month ago and 32 days' supply on hand a year ago.

The refinery data of this report were compiled from schedules of 352 refineries, with an aggregate daily recorded crude oil capacity of 3,691,650 bbls., covering as far as the bureau is able to determine, all operations during June, 1930. These refineries operated at 73 per cent of their recorded capacity, given above, as compared with 352 refineries operating at 73 per cent of their capacity in May.

INTERESTING DISPLAYS ARRANGED FOR OIL SHOW

W. A. Schlueter, chairman of the Scientific and Technical Committee of the International Petroleum Exposition, to be held in Tulsa October 4-11, has completed his organization and will observe the policy of placing specialists in charge of the newest development items in each branch of the industry.

J. M. Wadsworth, vice president and general superintendent of the Independent Oil & Gas Co., will be in charge of the refining division; C. F. Comstock of the Pure Oil Co. will supervise the selection of displays connected with production, and Emby Kaye of the Skelly Oil Co. will take charge of the natural gasoline department.

W. G. Heltzel, engineer for the Sinclair Pipe Line Co., will head the subcommittee on transportation, and Ray Long, vice president of the Oklahoma Natural Gas Corp., is subchairman in charge of the natural gas exhibits.

Emphasis is being placed this year on an open forum feature held in connection with the scientific and technical displays. Engineers of all classifications are asked to advise the committee of the problems they wish to discuss so that these questions may be grouped suitably and placed on a date schedule. Each of the open forum sessions will be supervised by experts in the problems slated for discussion.

Among the interesting displays already arranged for are: A presentation of shale oil samples and their by-products, under supervision of the United States Government, with James Duce of Boulder, Colo., in charge; a display exhibiting the more important products of natural gas, supervised by Edward Rawlins of the United States Bureau of Mines; a complete exhibit of the 85 different sets of apparatus used in making all of the American Petroleum Institute and the American Society for Testing Materials test on light fractions, oils, waxes, greases and petrolatum, among other products.

The Corning Glass Works exhibit will feature a demonstration in glass blowing, showing how all glass parts, lens excepted, in scientific instruments are made.

PENN MEX COMPLETIONS

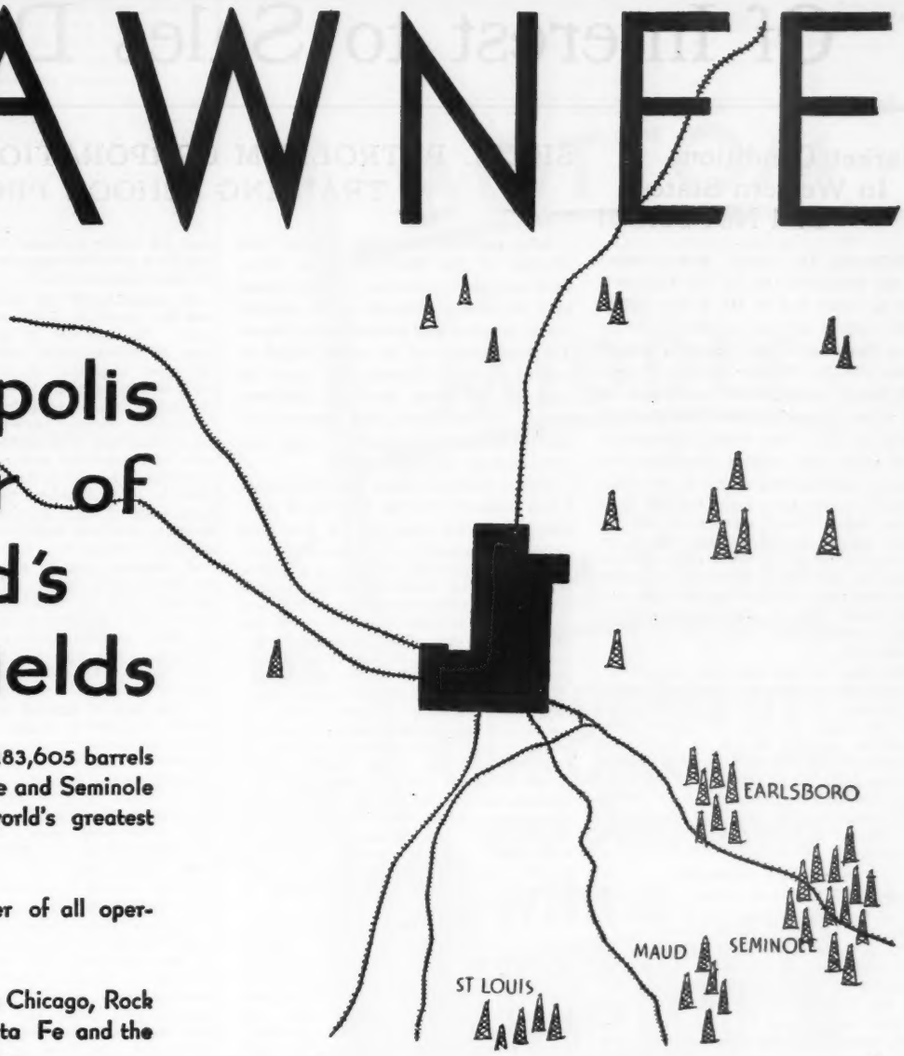
The Penn Mex Fuel Co. has completed its Paso Real No. 48, actual production being run to tank 2,200 bbls. per day, and also its Paso Real No. 50, actual production being run to tank 750 bbls. per day. Actual production is understood to mean the percentage of potential production (potential production determined by government inspector) permitted under the existing laws of Mexico or 40 to 49 per cent of potential according to size of well.

CHANGES ADDRESS

The Mississippi River Fuel Corp., which supplies natural gas from the Monroe Field in Louisiana to St. Louis, has moved its offices to the Continental Life Building, 3615 Olive Street, St. Louis.

SHAWNEE

The metropolis *and* center of the world's largest oil fields



WITH 2944 wells producing 283,605 barrels of oil daily, the Pottawatomie and Seminole county oil fields are the world's greatest producers.

And Shawnee is the natural center of all operations in these fields.

Shawnee is on the main line of the Chicago, Rock Island and Pacific, also the Santa Fe and the Oklahoma City, Ada and Atoka lines.

Twenty-two bus lines and a number of motor truck lines operate out of Shawnee over a network of paved and well maintained gravel highways which lead directly into the Wewoka, Maud, St. Louis, Asher, Seminole and Earlsboro field.

Economical, dependable electric power through the state's largest interconnected plant and transmission line system, sufficient to take care of any industrial demand, at attractive rates.

The strategic location of Shawnee, makes this the ideal city for the location of headquarters of those industries catering to the oil industry.

Complete information about Shawnee and its advantages as a distributing center for oil well supplies will be gladly furnished.

FACTS YOU SHOULD KNOW ABOUT SHAWNEE

Population: 23,276
Paved streets: 35 miles
Schools: 12; Churches: 18
Hotels: 8; Banks: 3
Retail stores: 285; Warehouses, 23
Wholesale houses: 12
Manufacturing plants: 27
Power Supply—from Central Stations
Lumber and coal yards: 25
Public parks: 2

SHAWNEE CHAMBER OF COMMERCE

Shawnee, Oklahoma — Ford C. Harper, Manager

Of Interest to Sales Departments

Market Conditions In Western States Still Not Settled

Following the recent announcement of the Standard Oil Co. of California that it would not in the future sell to price cutters, several companies in the West Coast states have made a similar policy effective in their sales to dealers.

Although normal tank wagon and retail prices on gasoline have been re-established on the West Coast following a brief price war, market conditions are still not satisfactory. Some of the independent dealers have again lowered their prices below those established by the major marketing companies. These reductions in many instances were promptly met by the larger operators. In other cases the price differences continue and it is feared that it will lead to another price war in some parts of the West Coast area.

Just how far the new plan of not selling to price cutters can be carried out is not known. The plan of giving the dealers the legal position of agents who would be required to sell at the prices established by the seller is said to have objectionable features both from the legal and practical phases. It is feared that dealers can too easily get other types of contracts to make the plan generally effective.

Standard's Statement

Regarding its future plans the Standard of California in a formal statement said:

"Laws enacted nearly 40 years ago to meet different conditions have been interpreted to prohibit agreements to curtail the production of refined products as well as agreements to regulate the price structures under which they are sold. Nevertheless, much can be accomplished if those engaged in the industry will use their individual efforts to stabilize marketing conditions for gasoline and if they will practice fair dealing in competition. Without a production of gasoline restricted to the demand, and without stabilized marketing conditions for the product, the curtailed production of crude petroleum will be only an idle gesture and the conservation of oil so earnestly supported by the federal administration will be doomed to failure.

"Among the causes destructive of stabilized marketing conditions is the dealer whose only aim, regardless of the reasonableness of prevailing prices, is to take the business of his neighbor by selling below the latter's price. In a stabilized market the suppliers aim to fix a price by agreement with their dealers which will afford the latter a reasonable margin of profit be it 3 cents or 4 cents a gallon, or whatever the figure. It is estimated that there are some 40,000 dealers on the Pacific Coast. Of these, over 39,000 are content to "live and let live." They take their margin and resell the gasoline supplied to them at prices fair to the public, and which yield the supplier and the dealer a fair profit. There are perhaps 1,000 dealers on the Pacific Coast whose policy is otherwise. They cut the price not because they believe it unfair or too high, but because they are determined to get another man's business regardless of the fairness of his price. The Standard Oil Co. of California announces as a policy that it will not sell its products to that class of dealer. It does not want his business. It matters not whether he is practicing his unfair competition with respect to the products of this company or of its competitors. So far as this company is concerned it will regard the dealer who cuts prices without respect to their reasonableness and to take the trade and livelihood of his neighbor as an outlaw in the business.

"Finally, in order to do its share toward maintaining a balance between supply and demand, this company will confine its manufacture of gasoline to the quantity required by its actual demand."

SHELL PETROLEUM CORPORATION TRAINING SCHOOL PROGRAM

After approximately two months' trial officials of the Shell Petroleum Corp. have expressed themselves as well pleased with the results obtained at the training school for sales and lubricating engineers. The first session of the school which is located at South Roxana, Ill., near the corporation's Wood River, Ill., refinery outside of St. Louis, the corporation's general headquarters, started in June and will continue through August.

While the first school has been established primarily for the training of sales and lubrication engineers, it has been definitely planned to later have its curriculum include such courses as advertising, accounting, auditing, service station operation, division operation and so on, so that the school is based upon the fundamental idea of in time making expert training in a wide variety of subjects available to the entire personnel.

The school is housed in a modern three-story brick building of approximately 30 rooms located in the center of a large tract of land approximately 1 mile by concrete highway from Shell's Wood River refinery. On the first floor is a combination auditorium and dining room, classrooms, and the offices of the director of the school. In the basement there is a complete, well equipped laboratory for testing oils, experimental work and other activities connected with this phase of the school's work.

The two upper floors of the building are used as a dormitory for the students all of whom live in the building during their attendance at the school. A competent housekeeper is in charge assuring comfortable living quarters and well cooked meals for the students. In addition an experienced commissary manager has been placed in charge of that important department of the school. All students are in the regular employ of the Shell Petroleum Corp.

The students are all picked men and are all university men. A roster of the students enrolled shows that they represent 17 states and one foreign country and have attended some 20 separate educational institutions.

In speaking of the school, its object and its future, R. J. Stevenson, director, said: "In this era of specilization, we hope to accomplish a number of things, the most important of which is to develop highly trained men—sales and lubrication engineers—capable of going into industrial plants armed with expert knowledge that will enable them to take care of lubrication under any operating condition. In the parlance of the street 'that is a large order,' nevertheless, our knowledge of what lubrication means to industry and how indispensable the right kinds of lubricants are to industrial life and progress, not to mention the wide experience and success of the Shell organization in the refining and selling of lubricants, convinces us that our efforts to train capable sales and lubrication engineers, will not only meet with success, but will have the sanction and support of industry, generally.

"The lack of trained sales and lubrication engineers in sufficient numbers to meet lubrication problems today, is apparent to anyone who gives careful thought to the subject. This statement is, however, no reflection upon the efforts of the considerable number of such men in the field today. Rather, it is a reminder that a veritable army of carefully trained sales and lubrication engineers are needed to adequately serve modern industry.

"In our school we start at the beginning, that is, we teach students the basis of lubrication which of course is crude oil and its proper selection. We then instruct them through lectures, charts, experimental work and actual contact with refinery practice and operation, the whys and wherefores of lubrication, its function and application. A few text books are used chiefly on the chemistry of petroleum. Lectures on various phases of lubrication are given. The students are all required to make notes on all subjects treated and thus acquire intimate knowledge on the subject."

Students at Shell training school.

USE SUBSTITUTE OILS

The use of olive oil and bean oil in place of oils made from petroleum for lubricating uses has recently proved successful according to reports from foreign countries.

The olive oil was used in Spain on a motor trip from Madrid to Seville. Olive producers sponsored the experiment. Due to an overproduction the producers are endeavoring to develop new outlets for olive oil.

In Manchuria, bean oil is being used in emergencies to lubricate Cadillac cars. The cars some of which have been in service over 10 years are used as buses. The trips some of which are over 1,000 miles are made over rough roads and bad weather conditions. At times mineral lubricating oils are not available and the bean oil is reported to give satisfactory service.

Motor Fuel Prices In Foreign Areas Show Wide Ranges

According to a survey just made public by the petroleum section, minerals division, Department of Commerce, retail gasoline prices in foreign countries for the first quarter of 1930 were found to range from 19.8 cents per gallon in Shanghai, China, to 69.2 cents per imperial gallon in Nairobi, Kenya, in northern Africa.

In the survey it was pointed out that prices quoted for the different countries should not be used for comparative purposes without taking into consideration the various factors which tend to make inequalities. These factors, it said, include distance from source of supply, quantity consumed, transportation costs, import duties, excise taxes, distribution and marketing costs, and quality of products sold.

In Shanghai, the survey showed, the price of gasoline runs from 19.8 to 20.6 cents per gallon in bulk, and 20.5 to 21.3 cents per gallon in tins. In Calcutta, India, the figures showed the price of retail gasoline to be nearly as low as the price in Shanghai, the price in the former city being 21.4 cents per gallon. Gasoline may be purchased in Kovno, Lithuania, at 24.6 cents per gallon, according to the figures and although the purchase price of gasoline in Manila, P. I., and San Juan, P. R., is 31 and 27 cents, respectively, it is explained that in the former city there is a tax of 7.6 cents per gallon and in the latter city a 4-cent tax must be paid.

The highest price paid for gasoline by consumers, the figures show, is in Nairobi, Kenya, where an imperial gallon in tins sells for 69.2 cents. Second to that is the price paid in La Paz, Bolivia, where consumers must pay 64.8 cents per gallon in tins, and the net highest price is paid in Addis Ababa, Ethiopia, where gasoline is sold in tins at 63.5 cents per gallon.

Kerosene Sales

The survey also shows that retail prices of kerosene in foreign countries during the first quarter of 1930 ranged from 13.4 cents per gallon in bulk in Vienna, Austria, to 68.1 cents per gallon in tins in La Paz, Bolivia. Second to the low price in Vienna was that paid in Cairo, Egypt, where kerosene may be purchased at 13.7 cents per gallon in bulk, and next was a price of between 14.5 to 29.6 cents per imperial gallon in tins at Singapore, British Malaya.

Excluding La Paz, Bolivia, the survey revealed the highest price paid for kerosene was in Athens, Greece, where the commodity retails for 62.7 cents per gallon. Throughout Canada, where the gasoline price ranges from 28 to 36 cents per gallon, there is a tax of 5 cents, the survey shows.

BRITISH IMPORTS GAIN

British imports of petroleum products during the first five months of the present year show an increase of 9 per cent over those for the corresponding period of last year, chiefly due to a 26 per cent increase in gasoline receipts. Lubricating and gas oils also arrived in larger volume, with decreases occurring in kerosene and fuel oil. Imports of crude oil are larger, with an increased proportion of South American oils. Preliminary figures for the first half of June show the year's first shipment of fuel oil from kerosene and imports of American oils well maintained.

DESIGN OF GRAVITY GATHERING SYSTEMS

(Continued from Page 33)

wise attempt to keep air out of the gravity lines, as its presence will not affect the discharge capacity of the line materially. However, in the great majority of gravity gathering lines now in use, it is very necessary to exercise such precautions and most gaugers are ever alert to shut off the tanks before they go on air and otherwise try to prevent air from entering the gravity lines as much as possible.

While the exact cause and effect of air pockets in gravity lines is well known to all interested parties, the underlying principles involved are not so generally well understood, particularly by those

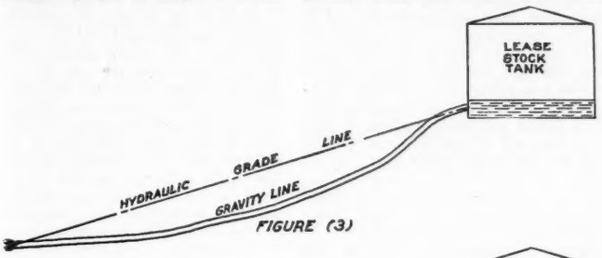


FIGURE (3)

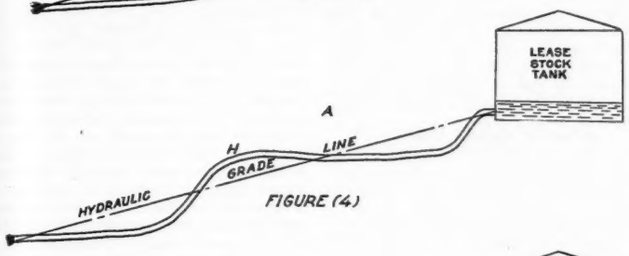


FIGURE (4)

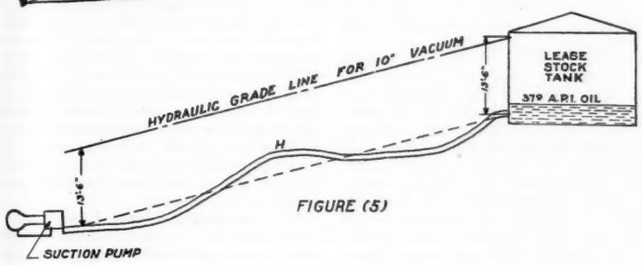
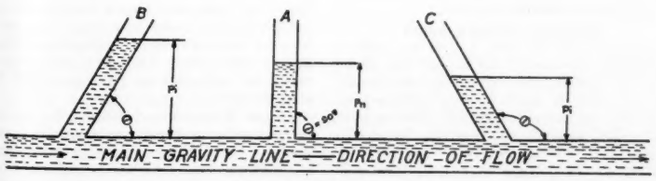


FIGURE (5)



PLAN VIEW
FIGURE (6)

to whom such knowledge would probably be of material benefit.

In technical terms the whole proposition is summed up as follows: If a pipe is laid so that a portion of it rises above the hydraulic grade line, as shown in Figure 4, a vacuum, or negative pressure, will exist in that portion of the line so long as the pipe is full of oil. However, any air or gas present in the line will not pass through the high place, as does the oil, and as a consequence the air or gas accumulates in it and when it does the pressure becomes the same as the atmosphere and this increase of pressure at the high point diminishes the flow of oil through the line. When this happens the hydraulic grade line is shifted to terminate at the summit of the high place, as illustrated by position A in Figure 4, and the rate of flow which then occurs at this point is the same as if the pipe was open at this point and discharge was occurring into the atmosphere. The remainder of the pipe downstream acts merely as a channel to deliver the oil from there on. So long as the summit of the high place in the line is still lower than the elevation of the lease tank, the flow will only diminish and not cease entirely.

The Hydraulic Gradient

The hydraulic gradient is a theoretical line or profile graphically plotted over the axis of a gravity line so that the vertical distance from any point on the profile to a point immediately beneath it on the gravity line is a measure of the intensity of pressure head at the latter point. Since the total loss of pressure head increases with the length of a gravity line, the hydraulic grade line, which represents graphically the pressure head at every section of the line, will have a general downward inclination in the direction of flow. For uniform flow in a gravity line that discharges into the atmosphere the hydraulic grade line is a straight line, having a constant slope, as illustrated in Figure 3. This, however, is very seldom the case in actual practice on account of sharp bends, fittings, changes in size of pipe, etc., all of which cause variable flow. Therefore, the hydraulic grade line for the actual pipe line will be broken and its inclination will vary from section to section. If there is an obstruction in a gravity line, such as a sharp bend, a section of smaller size pipe, or a gate valve partly closed, the velocity of flow is suddenly increased and the hydraulic grade line will take a sudden drop and then a sudden rise. This sudden drop is not all a loss of energy, but means that momentarily pressure is being converted into velocity; and then the sudden rise means that by diminution of velocity the pressure is being restored. The difference between the total head at one section of the pipe and total head

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. . . After a

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The "greater production" *Layne Milled Groove Screen* — oil industry's latest, greatest, and most important invention—is the fruit of more than a quarter century's experience in solving screening problems.

The old Layne screen had very materially helped to develop the coastal oil fields, and now, this exclusive *Milled Groove Screen* has been accepted by the leading oil companies abroad and in this country.

The *Layne Milled Groove Screen* is your definite guarantee for greater production —no clogging with mud and sand, no sand cutting—and it has the strength to safely stand 8,000 feet of drill pipe.

Install *Layne Milled Groove Screen* instead of wishing you had.

Write, wire or phone for quick service, information, or catalogue.

The Layne & Bowler Co.

Houston Texas

Install Milled Groove Instead of Wishing You Had

The Layne New York Co. 30 Church St., New York	The Layne & Bowler Corp. Los Angeles, Calif.	Vickers, Limited London, England

in another section downstream is lost head. Mere changes in velocity, intensity of pressure, or elevation must not be confused with lost head. While at one point in a gravity line nearly all the energy may be due to velocity and in another section of the same line the energy may be nearly all due to pressure or to elevation, yet the total energy or head may be nearly the same; and the only loss of energy or head would be that due to the energy necessarily consumed in overcoming frictional resistances and the bringing about the transformation of energy. These various resistances will assume different proportions in every different problem and may have to be considered, or may be neglected, according to their relative magnitude as discussed later.

The depth a line is laid below the hydraulic grade line is immaterial, but it should be remembered, however, that in order to obtain the best results the gravity line must not rise above the hydraulic grade line and this will be difficult to do if the flow is constantly changing, due to sharp bends, too small sections of pipe and the like, all of which cause sudden dips in the hydraulic grade line. It is, therefore, of utmost importance in laying out the main gravity lines and feeder lines from low leases that sharp bends and reductions of cross-sectional area of the pipe be eliminated as much as possible. In addition to causing sudden dips in the hydraulic grade line, such sharp bends and restrictions cause high frictional losses and consequently loss of total head which usually cannot be well afforded in these lines.

Effect of Suction Pump

In Figures 3 and 4 it is assumed that the end of the gravity line discharges into the atmosphere. This is never the case in actual practice as a suction pump is usually installed at this point which creates a partial vacuum in the suction line that ordinarily varies from 5 to 15 inches of mercury.

Supposing such a suction pump were installed on the discharge end of the gravity line shown in Figure 4 and that the partial vacuum created in the suction line is 10 inches of mercury which would be equivalent to a head of approximately 13 feet 6 inches of 37° A.P.I. gravity crude oil. The hydraulic grade line would then be drawn as shown in Figure 5, having the same slope as the one in Figure 4, but plotted 13 feet 6 inches higher. The pipe would then not lie above the hydraulic grade line at any point and no air could accumulate in the pipe at point "H" so long as the suction pump creates enough vacuum in the suction line to keep the hydraulic grade line above that point.

Design of Gravity Lines

In order to lay out a gravity gathering system properly, the size of pipe to be used in each section of the system should be determined with a view of keeping the flow in the main gravity line as constant as possible so that its hydraulic grade line will be nearly a straight line as shown in Figure 3. Given the volume, gravity and viscosity of the oil required to handle in each section of the main gravity line, together with the length of pipe and elevations supplied by the contour map of the territory in which it must be laid, there are several sets of charts and formulas available by use of which one can arrive at the proper sizes of pipe to use and the frictional losses that will be encountered. Particularly reliable data along this line has been published by William G. Heltzel of the Sinclair Pipe Line Co. in the June 5, 1930, issue of The Oil and Gas Journal and again in this issue. In calculating these theoretical pipe sizes required, liberal margins of safety of capacity should be used. It is good practice to design all gathering lines to have a capacity of anywhere from 25 to 50 per cent more than the actual average volume of oil it is required to handle because it may not be possible to use certain parts of the system while other parts are being used and it, therefore, becomes necessary to handle the oil from certain parts of the system in a shorter length of time at a greatly increased rate. Some oils congeal badly at low temperatures and consequently the viscosity used in making frictional loss calculations should be taken at nearly the coldest oil temperatures likely to be encountered in that particular territory. In oil pipe lines there is a tendency for the walls of the pipe to become coated with paraffin or asphalt, which reduces the diameter of the pipe and consequently its capacity and liberal allowance should also be made for this contingency. Some oils have a greater tendency to paraffin up the lines than others. In cases where such paraffin troubles are expected all lines should be connected up so that "go-devils" or pipe line scrapers can be pumped through them by means of a portable pumping unit which can be moved from lease to lease in order to keep the lines cleaned out.

Design of Feeder Lines

Very often trouble is encountered in getting tanks located at low elevations to gravitate out while tanks located at higher elevations are on the line. In fact, if check valves are not installed in the feeder lines connecting the low tanks to the main gravity line, the low tanks will be run over, resulting in a loss of oil and very often damage to the deck of the tanks. This is because the pressure head in the main gravity line at the low junction is greater than the static head in the feeder line at the same point and consequently the oil from the main line tends to enter the feeder line and flow upstream in the direction of the low tanks. If the production obtained from such low leases is small and sufficient storage room is available this trouble can easily be eliminated by holding the low tanks off the line until all of the high tanks are shut off; however, in flush fields such low leases may be large producers and on account of shortage of lease storage room it may become necessary to keep the oil moving from them almost continuously. Therefore, it is usually the most economical practice to install large feeder lines to all the low batteries and smaller feeder lines to the high batteries and thus throttle the flow from the high tanks by increasing the loss of total head in their feeder lines in order to avoid pressure heads in the main gravity line greatly in excess of the average pressure head caused by the elevation of the majority of the tanks connected to the system.

Installing Feeder Lines

Regular pipe fittings are ordinarily used to connect feeder lines from high tanks into the main gravity line because the loss of head so encountered is small in relation to the total head available, but, in connecting up feeder lines from low leases special care should be exercised to eliminate sharp bends and all other friction losses as much as possible, because the total head available is oftentimes very small and any unnecessary losses of head due to friction cannot be well afforded.

If the feeder line is inserted into the main line at a right angle as shown by position "A," Figure 6, the pressure head encountered would be practically the same as in the main line. If the feeder lines are inclined with or against the direction of flow in the main line the pressure encountered will be greater or less than the amount due at the mouth of "A." Thus the pressure encountered at the mouth of "B" will be slightly greater than at "A" and the pressure encountered at the mouth of "C" will be slightly less than "A." This is because the impulse in the direction of flow in the main line is proportional to the velocity head in the main line and the component of this in the direction of the feeder line tends to increase slightly the normal pressure when angle Θ is less than 90° and decrease it slightly when Θ is greater than 90° as illustrated by feeder line "C" in Figure 6. Obviously then in order to obtain the best results, under low pressure heads, the feeder lines should be installed as illustrated by "C." The exact benefit in reduction of entrance pressure accomplished in this way can be calculated by the formula:

$$Pi = Pn + \frac{V^2}{2g} \text{ Cos } \Theta \text{ very nearly}$$

Where Pi = pressure head encountered

at mouth of inclined pipe; Pn = normal pressure head due at mouth of pipe inserted at 90°; V = velocity in main line in feet per second; g = 32.16 feet per second; Θ = angle measured as illustrated in Figure 6.

Correcting Tentative Lay-out

After the frictional losses have been determined, it is possible to graphically plot the profile of the gravity line and its hydraulic grade line. In this way any proposed gravity line can be checked before it is laid to see that no part lies above the hydraulic grade line. This might save the cost of digging up and re-laying portions of the pipe line which might otherwise have been inadvertently run above the hydraulic grade line. It is also sometimes possible to save considerable money in length of pipe used by taking the line over a shorter route if it is buried to the proper depth. In cases where the cost of such deep ditching is so great and the distance around the high place encountered is so far that it is resolved to lay the line above the hydraulic gradient, it is good practice to install an air chamber at the highest elevation on the pipe so that the air may collect in it instead of the pipe. This will decrease the frequency of times the siphon breaks, however, provision should also be made for recharging the siphon when the flow diminishes by forcing oil into the line at a lower elevation.

Selection of Suction Pump

Horizontal duplex double-acting piston-packed power pumps of from 7-inch to 14-inch bore and of 10-inch or 12-inch stroke are most commonly used for suction pumps. In order to select the right size of suction pump for any particular gathering system, due consideration should be given to the fundamental principles of the mechanics and hydraulics involved. In selecting a pump for pressure duty most consideration is given to the discharge and practically no consideration is given the suction, as it is usually assumed that the suction requirements will be fully met and volumetric efficiency will be high in the neighborhood of 90 to 95 per cent.

However, in selecting a suction pump these considerations should be just reversed by practically disregarding the discharge conditions and giving most attention to the suction conditions.

One of the first things to be considered in the selection of a suction pump is, of course, the capacity required, giving due consideration to the volumetric efficiency likely to be encountered. The volumetric efficiency is the ratio of the actual discharge of the pump in barrels per hour to the piston displacement expressed in the same unit. In the case of a suction pump the volumetric efficiency is necessarily low, sometimes not over 50 per cent, and, therefore, the displacement of the pump must be considerably larger than the amount actually expected to discharge. In other words if it is desired to create a vacuum in the suction line the capacity of the pump must be greater than the maximum amount of oil that can be drafted through the gravity line. It should also be considered that a volatile liquid such as crude oil tends to vaporize in a vacuum and it is necessary to pump this vapor through the pump which reduces its volumetric efficiency. When this vapor is subjected to a positive pressure on the discharge side of the pump it is again converted into a liquid. The discharge pressure of suction pumps usually varies from 15 to 50 pounds per square inch, depending on the height of the tanks, size and length of the discharge lines. On the possibility that all of the oil vapor is not condensed in the length of time it is subjected to pressure in the discharge line, these lines should enter the side of the tanks, near the bottom rather than overhead, in order to reduce the evaporation losses.

Installing the Suction Pump

It is usual practice to set the suction pump in a pit of anywhere from 4 to 14 feet lower than ground level. The advantages gained in this way are twofold. First, the total head of the gravity lines is increased, giving greater capacity to the lines, which is of particular importance in cases where the oil from low leases must be handled. Second, the discharge pressure is increased, which helps to close and seat the suction valves properly. If the pit is deep and the suction maintained is slight the suction line might be above the hydraulic grade line at the top of the pit. However, this can usually be disregarded because any air or gas that tends to accumulate at this point is immediately drawn into the pump and the siphon thus restored. Nevertheless, it is good practice to ditch the gravity line as deep as economically practical on a gradual grade as it approaches the suction pump so that the top of the suction riser will be as low as possible, because in case an air pocket does form at this point the hydraulic grade line will terminate there and discharge will occur there and the riser will merely act as a channel to deliver the flow to the pump. On account of the certainty of a vacuum being present in the suction pipe special care should be exercised to see that all joints are perfectly air-tight as air will tend to enter here if at all possible. A gate valve should always be installed on the suction pipe close to the pump in order to hold back the oil in the gravity lines when it is necessary to open the pump for inspection, cleaning, or repairs. A by-pass line equipped with a gate valve should always be installed around the suction pump so that, when it is necessary to put a pump pressure on the gravity gathering lines in order to run scrapers through them, etc., it will be possible to by-pass the suction pump. A small by-pass line, usually of 2-inch size, should also be installed between the suction and discharge sides of the pump and be equipped with a relief valve for the purpose of protecting the pump against breakage which might be caused by someone accidentally closing a gate on the discharge line. The spring in the relief valve should be set so as to open at a pressure slightly in excess of the maximum operating discharge pressure of the pump.

A strainer should be installed in the suction pipe to protect the pump from getting any foreign material into the passages or under the valves. It is very important to take every precaution to protect the pump from getting clogged up as serious reduction in capacity will always ensue. A strainer of net area of from four to six times the area of suction pipe should be used. The net area is understood to mean the clear or free opening through each of the screens of the strainer. It is usually advisable to use a double strainer with removable baskets or screens so that one side can be used while the other side is being cleaned out.

Eliminating Pounding

A suction power pump, as ordinarily driven by means of a belt from the main-line pumping unit, is essentially a constant speed machine. If a full supply of oil is not available in the suction line, it usually cannot be slowed down until its capacity is equal to the maximum amount of oil that can be drafted through the gravity line, but must be run along at full speed, but only partially filling. In reciprocating suction pumps it is of considerable importance that no discontinuity of flow in the suction pipe shall take place, or in other words, no part of the oil in the suction pipe shall separate from the remainder, or it will cause excessive shocks to the pump and tends to broken joints in the suction line due to the sudden change of momentum of a large mass of moving oil in the gravity line overtaking the part from which it has become separated. If there is to be continuity of flow in the suction pipe and cylinders of the pump the velocity of the oil in the suction pipe must vary with the velocity of the pump plungers. As the velocity of the plungers is constantly changing the oil in the suction pipe is continuously being accelerated either positively or negatively. When the length of the suction pipe is long and the speed of the pump is fast, the effect of these accelerating forces tend to cause separation of the oil in the suction pipe and consequently violent hammer actions are set up. There are several means avail-

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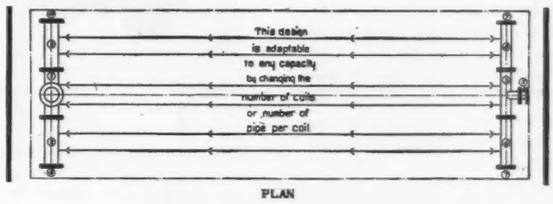
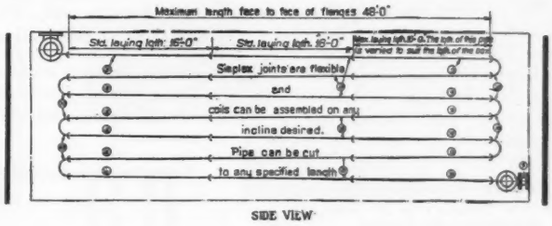
Three Pipe to the Run

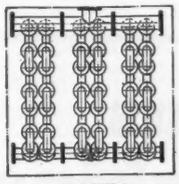
For Boxes 54 Ft. or Less *



PLAN


Maximum length face to face of flanges 48'-0"
Std. laying lgth. 16'-0"
Std. laying lgth. 16'-0"
Simplex joints are flexible
and
coils can be assembled on any
incline desired.
Pipe can be cut
to any specified length

SIDE VIEW



END VIEW

SIMPLEX pipe is furnished in long lengths with a maximum number of square feet of condensing area per joint. The fewer the joints the more rapid the assembly and less chance for leakage. It is easy to handle and the absence of fins and other protrusions insures minimum breakage in transit and assembly. It can be easily rolled about without fear of damage. You seek these advantages in your coils. You find them in Simplex Piping.

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Birmingham, Alabama

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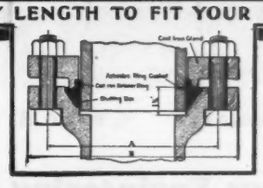

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For *Speed Pump* Regulation use this CF COMPRESSOR REGULATOR

NECESSARY relief of excess discharge pressure is made sure and safe for the compressor operated at constant speed. . . . On low pressure gas compressors, constant discharge is held without affecting pressure of supply main, regardless of differential between main and discharge pressures. . . . Equally successful for steam as a back-pressure regulator. . . Only means for close regulation of uniform pressure or electric driven pumps. . . . Applicable for gas, air, steam and water.

THE valve has a definite positive movement for a definite change in discharge pressure, and will remain indefinitely at some intermediate position between the wide open and closed position.

Excess discharge pressure flows through this regulator *without noticeable variation.*

Write for data pamphlet.

The Chaplin-Fulton Mfg. Co.
Manufacturers of Regulators for All Natural and Manufactured Gas Services
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able to reduce the effect of the accelerating forces.

1. A large pump should be used and run at a slow speed which will give the same capacity as needed.
2. Install an air chamber in the suction line close to the pump.
3. If an electric motor is the prime mover, use a variable speed motor and slow down the pump when pounding starts.
4. Crack or partially open the valve in the by-pass line when the pounding starts and open wide enough until it ceases.

Slow pump speeds give the best results as only slight separation can then occur.

An air chamber in the suction line acts as a shock absorber. It will not always eliminate the trouble if the vacuum is high, but under any given condition the pump can be run at a greater speed without fear of separation with an air chamber on the suction line than without one. The volume of the air chamber should be from four to six times the displacement of the pump. It should be provided with a gauge glass and an air cock at the top.

Conclusion

The subject under consideration and the underlying principles of mechanics and hydraulics involved cannot be dealt with extensively in a paper of this size, but if enough has been said to enable the reader to check up such troubles as encountered and perhaps better the situation, the purpose of the paper has been fully accomplished.

WILDCAT OPERATIONS IN KANSAS

(Continued from Page 44)

ELLIS COUNTY
Central Commercial Oil Co.'s No. 1 Helms, SE cor. NE Sec. 2-12-20w ..... Fishing 3,140 ft.
Streeter & Stearns' No. 1 Leiker, SW NE Sec. 26-13-20w .. Drlg. 3,650 ft.
Byrene et al's No. 1 Fisher, NW SE Sec. 4-11-20w ..... Shut down 1,000 ft.
Rush Oil Co.'s No. 1 Gatewood, NW cor. NW Sec. 4-15-20w ..... Shut down 3,750 ft.

ELK COUNTY
Croft & Frazier's No. 1 Keys, SE NE Sec. 26-31-10 .... Drlg. 220 ft.

ELLSWORTH COUNTY
Slick et al's No. 1 Unknown, NW cor. Sec. 25-17-10w .... Drlg. 950 ft.

FORD COUNTY
McNabb et al's No. 1 Fowler, C SE Sec. 26-27-22w .... Shut down 400 ft.
Swain et al's No. 1 Kenthorne, C NW Sec. 21-25-24w .. Shut down 3,575 ft.

GOVE COUNTY
Valerius & Baucher Oil Co.'s No. 1 Todd, NW cor. Sec. 24-13-27w ..... Drlg. 1,980 ft.

GRAHAM COUNTY
Gulf Coast Oil Co.'s No. 1 Johnson, C S half Sec. 27-8-25w. Shut down 4,370 ft.
Naylor et al's No. 1 St. John, NW SE SE Sec. 27-8-25w. Drlg. 4,370 ft.

GRANT COUNTY
McKenna et al's No. 1 Sullivan, NE cor. Sec. 12-29-38w. Shut down 50 ft.

GREENWOOD COUNTY
Staats et al's No. 1 Swan, NE NW Sec. 3-25-12 ..... Rig.
Mid-Continent Pet. Corp.'s No. 1 Griss, NW SW Sec. 33-25-13 ..... Abandoned 1,628-42 ft.; water.
Harwood Oil Co.'s No. 1 Log, SW NE Sec. 20-25-10 .... Drlg. 898 ft.
Mallory's No. 1 Denchfield, SE NW Sec. 12-27-9 ..... Shut down 1,810 ft.
Bundy, Smith & O'Neil's No. 1 Ford, NE NW Sec. 28-25-13 ..... Shut down 50 ft.
F. Konkay et al's No. 1 Rock, NW NE NE Sec. 7-27-12.. Shut down 1,836 ft.

HARPER COUNTY
Beeler et al's No. 1 Bear, C NE Sec. 21-31-6w ..... Shut down 1,830 ft.

KINGMAN COUNTY
Slick, Pryor & Lockhart's No. 1 Wetherall, NE SW Sec. 36-29-6w ..... Rig.

KIOWA COUNTY
Phillips-Prairie's No. 1 Bean, NE SE Sec. 10-30-17w .... Underreaming 10-in. csg. 3,135 ft.
McKenna et al's No. 1 Ralson, C NE Sec. 14-28-20w .... Rig.

LYONS COUNTY
Griffith et al's No. 1 King, NW cor. Sec. 8-19-10 ..... Shut down 910 ft.

MARION COUNTY
Magnolia Pet. Co.'s No. 1 Davis, SE NW Sec. 18-21-2 .... Drlg. 1,200 ft.
Dixie and Arkansas Fuel's No. 1 Hacker, NW NE Sec. 6-17-1 ..... Drlg. 815 ft.
Empire Oil & Ref. Co.'s No. 1 Hiebert, SE SW SE Sec. 20-20-2 ..... Abandoned 3,040-75 ft.; water.
Marshall et al's No. 1 Higgins, NE cor. Sec. 33-19-5 .... Rig.

MARSHALL COUNTY
Swicker & Sincox's No. 1 Remple, C N half NW Sec. 22-4-9 ..... Drlg. 1,245 ft.
Brazier et al's No. 1 Runkel, SE NW Sec. 13-2-6 ..... Shut down 50 ft.

McPHERSON COUNTY
Simmons & Canary's No. 1 Bishop, NW SW Sec. 15-18-1w ..... Drlg. 2,990 ft.
Harry Skelly et al's No. 1 Neufeldt, SE NE Sec. 19-21-3w ..... Rig.

MIAMI COUNTY
Clark's No. 1 Vaughn, SE SW Sec. 28-17-22w ..... Drlg. 1,200 ft.

MORTON COUNTY
Argus Prod. Co.'s No. 2 Drubilbis, C NW Sec. 9-34-39w.. Drlg. 2,586 ft.
Argus Prod. Co.'s No. 1 Morgan, C NW Sec. 8-33-39w .. Rig on ground.
McNabb et al's No. 1 Rickart, C SE Sec. 5-35-39w .... Drlg. 2,680 ft.
Argus Prod. Co.'s No. 1 Tillet, C SW Sec. 21-34-39w ..... Drlg. 2,330 ft.
Argus Prod. Co.'s No. 1 Sullivan, C NW Sec. 29-34-39w .. Spudding.
Argus Prod. Co.'s No. 1 Burton, C SE Sec. 11-33-40w ..... Drlg. 2,428 ft.
Argus Prod. Co.'s No. 1 Mangels, C SE Sec. 4-33-39w .... Drlg. 2,890 ft.
Argus Prod. Co.'s No. 1 Morgan, C SW Sec. 6-33-39w .... Drlg. 2,475 ft.
Argus Prod. Co.'s No. 1 Mangels, C NE Sec. 20-33-39w ... Drlg. 2,480 ft.
Argus Prod. Co.'s No. 1 Garner, C SE Sec. 18-33-39w .... Drlg. 2,459 ft.
Argus Prod. Co.'s No. 1 Watson, C NE Sec. 27-34-40w ... Drlg. 2,440 ft.
Argus Prod. Co.'s No. 1 Thompson, C NW Sec. 18-34-39w. Drlg. 2,710 ft.
Argus Prod. Co.'s No. 1 Darth, C NE Sec. 20-34-39w .... Completed 2,582-2,850 ft.; 7,000,000 ft. gas.
Hydraulic Oil Co.'s No. 1 State Land, NW SE Sec. 22-24-43w ..... Shut down 2,000 ft.; gas at 1,200-10 ft. and at 1,350 ft.

MORRIS COUNTY
Henderson et al's No. 1 Selsman, SW SE Sec. 24-16-9 .. Rig.
Urschell et al's No. 1 Scott, NE NW Sec. 6-16-6 ..... Shut down 2,420 ft.

OSAGE COUNTY
Riggs & Smith's No. 1 Wood, SE NW Sec. 21-14-15 .... Drlg. 410 ft.

PAWNEE COUNTY
Skelly Oil Co.'s No. 1 Milhouse, C SE Sec. 34-23-17w .. Fishing 4,605 ft.

PRATT COUNTY
Wilcox O. & G. Co.'s No. 1 Bappin, SW NW Sec. 7-26-15w ..... Shut down 4,005 ft.

RENO COUNTY
Shell Pet. Corp.'s No. 1 Popp, NW cor. Sec. 11-25-5w .... Spudding.
E. L. Study and H. L. Turner's No. 1 Haury, NE NW Sec. 1-23-4w ..... Drlg. 2,550 ft.
Phillips Pet. Co. and Tom Palmer's No. 1 Harsch, NE SE Sec. 14-26-5w ..... Drlg. 3,150 ft.
United Pet. Co.'s No. 1 Houston, NW cor. Sec. 4-22-10w .. Drlg. 1,900 ft.
C. A. Cheney and M. M. Valerius' No. 1 Stevens, C NE SE NE Sec. 6-26-7w ..... Drlg. 3,800 ft.

RICE COUNTY
Gypsy Oil Co.'s No. 1 Koch, SE NE NW Sec. 35-20-9w .. Drlg. 1,907 ft.
Hershey Golden & Skelly's No. 1 Brandenstein, Sec. 10-19-10w ..... Rig on ground.
McPherson and Shell's No. 1 Jennings, NE SW NW Sec. 29-18-6w ..... Drlg. 3,396 ft.
Miller & Brown's No. 1 Schartz, Sec. 14-20-10w ..... Drlg. 2,988 ft.
Hoffner, Lee & Shell's No. 1 Slad Farm Corp., C SW Sec. 33-19-6w ..... Drlg. 2,750 ft.

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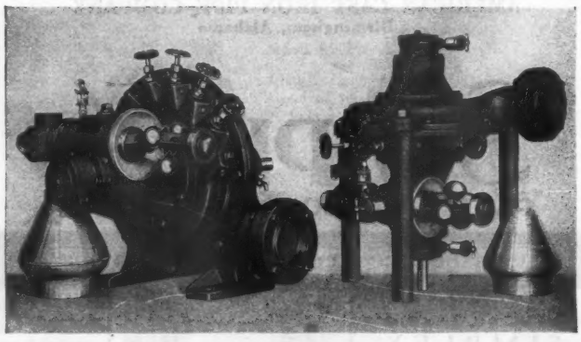

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Tatlock et al's No. 1 Ploog, C SW SE Sec. 33-18-9w ....Drlg. 3,265-71 ft.; show oil; swabbed 56 bbls.
Danciger et al's No. 1 Bell, C SW Sec. 16-19-8w .....Drlg. 3,540 ft.

ROOKS COUNTY

Streater-Stearns' No. 1 Conger, SE NW NE Sec. 16-10-16w .....Shut down 250 ft.

RUSH COUNTY

Prairie et al's No. 1 Lecker, NW SW SW Sec. 5-16-18w..Drlg. 880 ft.
Syndicate Oil Co.'s No. 1 Lannen, C SW Sec. 11-18-16w ..Location.
McPherson O. & G. Co.'s No. 1 Brack, C NW Sec. 24-17-16w .....Drlg. 2,916 ft.
Syndicate Oil Co.'s No. 1 Mohr, C SW Sec. 2-18-16w ..Drlg. 2,670 ft.
Danciger Oil & Refining Co.'s No. 1 Nave, NW cor. Sec. 26-17-17w .....Total depth 3,606 ft.; shut down

RUSSELL COUNTY

Streater & Stearns' No. 1 Mitchell, SE cor. Sec. 6-15-14w..Drlg. 1,795 ft.
Empire O. & R. Co.'s No. 1 Herbel, NW NE SW Sec. 26-14-14w .....Drlg. 2,395 ft.
Slick et al's No. 1 Berrick, SE SW Sec. 23-15-13w .....Show oil, gas and water 3,292-3,322 ft.; shut down.
Empire and Prairie's No. 2 Ochs, SE NE Sec. 23-15-14w..Drlg. 3,347 ft.
Austin Drlg. Co.'s No. 1 Rochfellow, SE cor. Sec. 6-13-12w .....Shut down 1,884 ft.
Gilbreath et al's No. 1 Bratton, C NE Sec. 33-11-13w ....Shut down 1,010 ft.

SEDGWICK COUNTY

Newman et al's No. 1 Bawly, SE NW NE Sec. 2-27-2 ..Drlg. 2,475 ft.
Tavender et al's No. 1 McLean, SE SW SE Sec. 23-26-1w .....Shut down 975 ft.

SALINE COUNTY

Twin Mounds Oil Co.'s No. 1 Weis, C W half NE NW Sec. 20-13-4w .....Drlg. 1,940 ft.

SHAWNEE COUNTY

Jenkins & Scott's No. 1 Sherman, NW NE Sec. 28-10-15 .....Abandoned 1,050 ft.

STAFFORD COUNTY

Boucher Oil's No. 1 Christenson, NW cor. Sec. 22-22-11w. Drlg. 2,978 ft.
Boucher Oil's No. 1 Groves, NE cor. Sec. 9-22-11w .....Drlg. 2,665 ft.
Midwest's No. 36 Richardson, SE cor. Sec. 36-22-12w ....Fishing 2,838 ft.

STEVENS COUNTY

Argus Prod. Co.'s No. 1 Ehrhard, C NW Sec. 11-35-39w..Rig.
Argus Prod. Co.'s No. 1 Wiley, C NE Sec. 4-35-37w .....Rig.
Argus Prod. Co.'s No. 1 Ridpath, C SE Sec. 27-34-37w ....Rig.
Argus Prod. Co.'s No. 1 Gibbons, C SE Sec. 29-34-37w ...Rig.
Agate Oil Co.'s No. 1 Gregory, NW SE Sec. 19-33-38w ..Drlg. 2,500 ft.
Argus Prod. Co.'s No. 1 Knier, C SW Sec. 27-34-37w ....Drlg. 1,617 ft.
Argus Prod. Co.'s No. 1 Harrison, C SW Sec. 30-34-37w..Rig.
Argus Prod. Co.'s No. 1 Irwin, C SE Sec. 10-35-37w ....Rig.
Argus Prod. Co.'s No. 1 Ratcliff, C SE Sec. 8-33-37w ...Completed 2,507-2,775 ft.; 1,000,000 ft. gas.
Argus Prod. Co.'s No. 1 Stone, C NE Sec. 3-33-39w .....Drlg. 2,705 ft.
Argus Prod. Co.'s No. 1 Libon, C NE Sec. 2-34-39w ....Drlg. 2,516 ft.
Barrington et al's No. 1 Creamer, C NW Sec. 2-35-39w..Drlg. 1,405 ft.
Freedell Const. Co.'s No. 1 Presinger, C SE Sec. 22-31-38w .....Drlg. 2,250 ft.
Mangle et al's No. 1 Youngren, C SE NW Sec. 24-32-39w .....Drlg. 2,523 ft.
McNabb and Mid-Kansas' No. 1 Rhinehart, C NE Sec. 23-32-39w .....Rig.
McNabb et al's No. 1 Porter, Sec. 4-31-37w .....Drlg. 1,750 ft.
W. Sidwell et al's No. 1 Kelly, SW cor. NE Sec. 16-34-38w .....Shut down 1,600 ft.

SUMNER COUNTY

Magnolia Pet. Co.'s No. 1 Shriver, NW SW Sec. 9-33-2 ....Drlg. 1,980 ft.
Disney et al's No. 1 Fay, C E half SE Sec. 14-34-1w ....Rig.
Davidson et al's No. 1 Strickland, SW cor. SE Sec. 12-35-1w .....Rig.

WASHINGTON COUNTY

Sincox et al's No. 1 Penwell, NW SE NE Sec. 16-3-3 ....Drlg. 510 ft.

WILDCAT OPERATIONS IN NEBRASKA

FRANKLIN COUNTY

U. R. Drlg. Co.'s No. 1 Brunkle (twin well), C NW SW NE Sec. 2-3n-13w .....Rig.

CHASE COUNTY

Chase Pet. Co.'s No. 1 Ingold, C NE Sec. 24-6n-38w ....U. R. 5-in. csg.; T. D. 4,265 ft.

FURNAS COUNTY

Southwestern Pet. Corp. of Nebraska's No. 1 Montague, SE SW NW Sec. 28-1n-22w .....Shut down 1,750 ft.
Graham Bros.' No. 1 Edwards, NW SW Sec. 13-2n-22w..Shut down 3,250 ft.

PHELPS COUNTY

Trees Oil's No. 1 Bergan, Sec. 22-6-19w .....Rig on ground.

RICHARDSON COUNTY

Norton et al's No. 1 Albin, NE cor. Sec. 26-1-14 .....Miss. lime 2,200 ft.; landing 8-in. casing.

ROCK COUNTY

North Central Dev. & Drlg. Co.'s No. 1 Leonard, SE cor. NE Sec. 14-32-18w .....Drlg. 900 ft.

WEBSTER COUNTY

Mid-Kansas Exploration Co.'s No. 1 Platt, C SE one-half Sec. 2-1n-11w .....Drlg. 2,125 ft.

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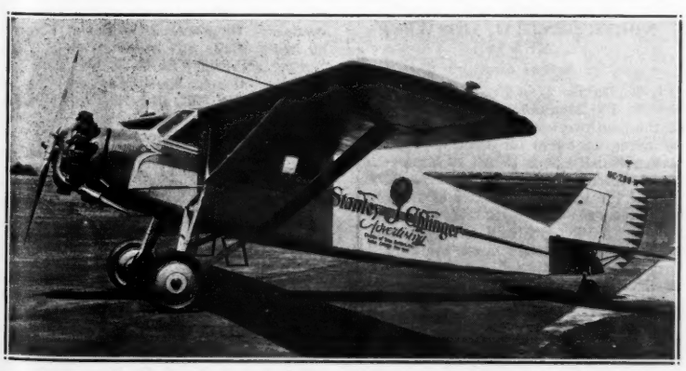

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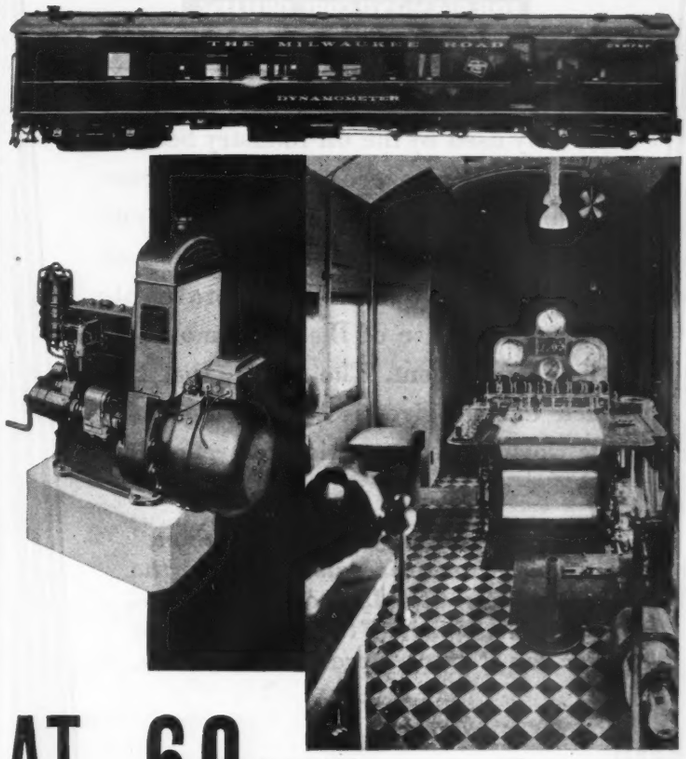

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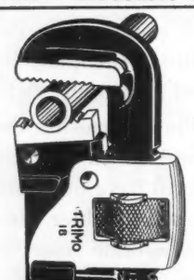

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TRIMO
Pipe Wrench

NEW LOCATIONS IN TEXAS PANHANDLE AND NORTH AND WEST TEXAS FIELDS

TEXAS PANHANDLE

Gray County

Gulf Production Co.'s No. 6 J. M. Saunders, trustee-A, 330 feet north and east of the SW cor. NE, Section 40, Block 3, I.&G.N. Survey. Gulf Production Co.'s No. 5 A. Combs and others, 330 feet south and west of the NE cor. SE, Section 38, Block 3, I.&G.N. Survey. Cockrell-McIlroy Oil Co.'s No. 1 M. E. Jackson, 330 feet south and west of the northeast corner of the east 110 acres of the SE, Section 138, Block 3, I.&G.N. Survey. Continental Oil Co.'s No. 1 Combs & Worley, 330 feet north and 350 feet west of the SE cor. NE, Section 38, Block 3, I.&G.N. Survey. D. Graham and others' No. 1 Robert Sullivan, 792 feet south and 470 feet east of the NW cor., Section 136, Block 3, I.&G.N. Survey, being 330 feet south and west of the northeast corner of their 40-acre lease. Magnolia Petroleum Co.'s No. 2 R. J. Sailor, 330 feet north and west of the southeast corner of the east 80 acres of the NE, Section 138, Block 3, I.&G. N. Survey. Phillips Petroleum Co.'s No. 3 J. B. Bowers, 990 feet south and 320 feet east of the NW cor. E half SW, Section 63, Block B-2, H.&G.N. Survey. The Texas Company's No. 17 J. B. Bowers, 990 feet south and 1,320 feet east of the NW cor. E half, Section 89, Block B-2, H.&G.N. Survey. The Texas Company's No. 2 W. J. Brown, 170 feet south and 330 feet west of the NE cor. NW, Section 137, Block 3, I.&G.N. Survey. Wilcox-Pampa Oil Co.'s No. 18 Combs & Worley, 330 feet south and east of the NW cor. SW, Section 35, Block 3, I.&G.N. Survey.

The Texas Company's No. 21 G. H. Saunders, 885 feet north and 1,241 feet west of the most southerly SE cor., Section 1, B.&B. Survey. Danciger Oil & Refining Co.'s No. 3 M. S. Arnold, 330 feet south and east of the NW cor. SE, Section 149, Block 3, I.&G.N. Survey. Midwest Exploration Co.'s No. 1 T. B. Cobb, 400 feet north and 1,320 feet east of the SW cor. NW, Section 165, Block 3, I.&G.N. Survey.

Hutchinson County

Holmes and others' No. 3 J. L. Moore, 330 feet north and west of the SE cor. E half SE, Section 125, Block 4, I.&G. N. Survey. The Texas Company's No. 6 J. L. Moore, 330 feet north and 990 feet west of the SE cor. SW, Section 125, Block 4, I.&G.N. Survey.

Great Plains Oil & Gas Co.'s No. 1 J. M. Sanford, at the center of the south 160 acres of the north 320 acres of Section 87, Block 46, H.&T.C. Survey.

Wheeler County

Lone Star Gas Co.'s No. 1 H. Close, at the C SE SW, Section 78, Block 23, H.&G.N. Survey. Same company's No. 1 C. A. Ritchey, C NE NE, Section 3, Block 24, H.&G.N. Survey.

NORTH CENTRAL AND WEST TEXAS

Archer County

J. B. Baker, Jr.'s No. 1 J. H. Turbeville-B, 150 feet north and 270 feet east of the southwest corner of the northwest 40 acres (square) of Section 35, Club Ranch Subdivision. Beard & Hammond's No. 1 W. H. Terrell, 150 feet south and east of the northwest corner of the south 80 acres of Section 18, W. L. Herring Survey, A-168. Bridwell Oil Co.'s No. 7 R. W. Fails, 150 feet north and 450 feet west of the southeast corner of the R. W. Fails 122.5-acre tract out of Section 2,419, T.E.&L. Survey. Bridwell Oil Co.'s No. 1 F. C. Green, 3,883 feet north and 1,450 feet east of the southwest corner of the Joseph Levins Survey, A-259. Continental Oil Co. and Gilliland & Rosser's No. 1 H. L. Morrison, 1,432 feet south and 150 feet west of the northeast corner of the H. L. Morrison 277.9-acre tract out of Section 2,403, T.E.&L. Survey. F. P. Cullum and others' No. 8 Falls County School Land, 200 feet south and west of the NE cor., Section 9, Falls County School Land, A-130. P. R. Flake and others' No. 1 J. A. Bell, 150 feet north and 1,080 feet east of the SW cor., Section 13, Block 5, Clark & Plumb Subdivision. Golding & Cochran's No. 9 H. E. Brown, 600 feet north and 2,394 feet west of the southeast corner of the H. E. Brown 184.8-acre tract and located in Section 6, B.B.B.&C. Survey, A-826. P. F. Gwynn's No. 1 Fred W. Jenkins, 1,050 feet south and 450 feet east of the NW cor., Section 11, South Anderson Ranch Subdivision.

Heydrick & Hickman's No. 2 Abercrombie & Taylor, 150 feet south and east of the NW cor., Section 40, Club Ranch Subdivision. C. E. Litchfield's No. 1 J. Richardson, 650 feet north and 500 feet west of the SE cor., Section 1, G. P. Meade Subdivision, 56 Pasture Survey. P. Marr and others' No. 1 W. L. Andrews, 1,500 feet south and 150 feet west of the northeast corner of the G. C. Farley Survey, A-129. W. E. Maxon, Jr.'s No. 7 F. C. Green-B, 750 feet south and 1,450 feet east of the northwest corner of his 320-acre lease "B," out of the Joseph Levine Survey, A-259. A. P. Nicholson's No. 2 Mrs. M. Taylor, 850 feet south and 150 feet west of the NE cor., Section 20, W. L. Herring Survey, A-168. A. P. Nicholson and others' No. 1 T. L. Hudson-A, 750 feet south and 150 feet east of the northwest corner of the T. L. Hudson 160-acre tract out of the Thomas Toby Survey, A-644. Perkins & Cullum's No. 2 Falls County School Land (Hanszen), 150 feet south and east of the NW cor. W half, Section 14, Falls County School Land, A-130. Pois & Schultz's No. 2 F. C. Green, 3,650 feet south and 1,684 feet east of the northwest corner of Joseph Levins Survey, A-259, being 150 feet north and west of the southeast corner of their 40-acre lease. Underwood Drilling Co. and others' No. 7 R. D. Andrews, 500 feet north and 1,225 feet east of the SW cor. N half, Section 1,805, T.E.&L. Survey.

Perkins & Cullum's No. 2 C. A. Mangold, 750 feet north and 150 feet east of the SW cor., Section 8, Mangold Subdivision. John Dixon and others' No. 1 J. T. Richardson, 150 feet north and 1,817 feet east of the SW cor., Section 10, Thomas McCoy Survey, A-269, being 150 feet north and 166 feet east of the southwest corner of their 3-acre lease.

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Fain-McGaha Oil Corp.'s No. 1 W. H. Portwood-G, 450 feet south and west of the NE cor. NW, Section 1,573, T.E.&L. Survey. W. W. Silk's No. 1 W. H. Portwood-B, 150 feet north and west of the southeast corner of the northwest of the W. Godden Survey, A-152. Douglas Oil Co.'s No. 1 Mrs. A. F. Robertson, 2,700 feet south and 628 feet west of the NE cor., Section 264, Block 45, H.&T.C. Survey.

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Survey. W. A. Thompson and others' No. 1 Seale estate, 827 feet north and 3,514 feet west of the most northerly SE cor., Section 13, Block 3, T.&P. Survey.

Coleman County

F. A. Lane's No. 1 E. E. Rich, 870 feet north and 450 feet west of the SE cor., Section 5, Comal County School Land, No. 181. Roberts Oil and Atlantic Oil Producing Co.'s No. 1 R. O. McClure, 1,967 feet south and 330 feet west of the northeast corner of the R. O. McClure 400-acre tract out of the J. B. Beall Survey, No. 301.

Sterling Petroleum Co.'s No. 1 E. S. Cox, 300 feet south and east of the northwest corner of the north 30 acres of the W half SW, Section 30, H.T.&B. Survey. J. L. Hamon's No. 1 J. W. Wells, 450 feet south and east of the northwest corner of the south 71 acres of Section 15, North Subdivision, M. Martinez Survey, No. 751. Lloyd Oil Corp.'s No. 14 R. G. Bartholomew, 2,650 feet north and 1,075 feet east of the southwest corner of the W. Farris Survey No. 279, being 405 feet northwest of No. 13.

Cooke County

Clark & Van Orden's No. 1 F. Robinson, 276 feet south and 150 feet east of the northwest corner of the D. C. Robinson Survey, A-855. Danciger Oil & Refining Co.'s No. 2 H. Fleitman, 150 feet south and 450 feet east of the northwest corner of the H. Fleitman 55-acre tract out of the J. Clark Survey, A-194. Danciger Oil & Refining Co.'s No. 1 J. W. Mount-C, 150 feet north and 240 feet east of the southwest corner of the J. C. Meeks Survey, A-758. Danciger Oil & Refining Co.'s No. 1 J. C. Reaves and others, 250 feet south and 150 feet west of the northeast corner of the south 60 acres of the J. C. Reaves and others 126-acre tract out of the A. G. Harris Survey, A-1,652. Deep Rock Oil Co.'s No. 1 R. M. Lawson, 150 feet north and east of the southwest corner of the R. M. Lawson 210.5-acre tract out of the H. Nail Survey, A-790. Gulf Production Co.'s No. 2 J. T. Donald, 1,750 feet 28 degrees east of the north corner of the M. J. Doyle Survey, A-1,672, and 161 feet south 62 degrees east of the northwest line of the J. T. Donald 369-acre tract out of the John Guffey Survey, A-1,545.

Comanche County

Lone Star Gas Co.'s No. 1 A. Dunn, 320 feet south and west of the northeast corner of the N. H. Rector Survey.

Crane County

Gulf Production Co.'s No. 80 McElroy, 2,103 feet south and 3,300 feet west of the northeast corner of Gulf Production Co.'s lease out of Section 201, Block F, C.C.S.D.&R.G.N.G. Survey. Same company's No. 81 J. T. McElroy, 2,762 feet south and 3,630 feet east of the northwest corner of the Gulf Production Co.'s lease out of Section 200, Block F, C.C.S.D.&R.G.N.G. Survey. C. C. Duffey's No. 1 Cowden Brothers & Co.-C, 2,640 feet north and 3,960 feet east of the southwest corner of the J. Cordona Survey.

Gulf Production Co.'s No. 82 J. T. McElroy, 2,762 feet south and 990 feet east of the northwest corner of the Gulf Production Co.'s lease out of Section 200, Block F, C.C.S.D.&R.G.N.G. Survey. Church & Fields' No. 3 University-Collett, 990 feet north and 330 feet west of the SE cor. W half NE, Section 34, Block 30, University Land.

Crockett County

Magnolia Petroleum Co.'s No. 2 A. C. Hoover, 2,310 feet north and 335 feet west of the SE cor., Section 2, Block FF, B.&B. Survey, A-4,500.

Culberson County

Grisham-Hunter Corp.'s No. 2 W. D. Garren, 2,475 feet north and 1,566 feet west of the SE cor., Section 20, Block 89, School Land.

Eastland County

Southern Oil & Producing Co.'s No. 1 C. F. Summerall, 1,000 feet south and 660 feet east of the NW cor. SW, Section 6, Block 4, H.&T.C. Survey. Anna Belle Oil Co.'s No. 1 M. V. Hoyt, 2,600 feet south and 1,800 feet east of the NW cor., Section 84, Block 4, H.&T.C. Survey.

Hoffman & Page's No. 4 S. N. Coon, 150 feet south and 1,152 feet east of the northwest corner of the S. N. Coon 77.6-acre tract out of Section 27, Block 2, H. &T.C. Survey. Humble Oil & Refining Co.'s No. 2 E. A. Whitesides, 2,711 feet south and 2,650 feet west of the northeast corner of the J. Rubarth Survey.

Ector County

Humble Oil & Refining Co.'s No. 1 E. J. Jones, 330 feet north and 423 feet east of the SW cor., Section 44, Township 3s, T.&P. Survey. Landreth Production Corp.'s No. 4 University-T, 330 feet south and 1,320 feet west of the NE cor., Section 3, Block 35, University Land.

Erath County

R. C. McCarter and others' No. 1 J. H. Cage, 1,525 feet north and 1,080 feet west of the SE cor., Section 29, H.T.&B. Survey.

Irion County

Straughan and Texannati Oil Co.'s No. 3 J. M. Nutt, 804 feet south and 150 feet west of the NE cor. NW NW, Section 6, Gonzales County School Land.

Williams & Williams Drilling Co.'s No. 1 W. M. Noelke, 200 feet south and 1,020 feet west of the NE cor., Section 8, City of San Antonio Survey.

Jack County

Panhandle Refining Co.'s No. 3 Leffel-Morrissey-A, 1,077 feet north and 206 feet west of the southeast corner of its 143-acre lease "A," out of the I. Hughson Survey A-256.

Loving County

Henshaw and others' No. 1 Reagan & McElvain, 990 feet northwest of the southeast line and 330 feet northeast of the southwest line of Section 84, Block 1, W.&N.W.R.R. Survey.

Palo Pinto County

Bennings and others' No. 1 R. C. and R. D. Hinkson, 2,900 feet south and 500 feet west of the NE cor., Section 86, Block 3, T.&P. Survey. F. Guyer, trustee's No. 1 G. C. Jones, 150 feet north and west of the southeast corner of the north 40 acres of the J. A. Fortune Survey, A-185.

Pecos County

Cardinal Oil Co.'s No. 2 J. H. Tippett (Tidal), 150 feet north and east of the SW cor. NE, Section 40, Block 194, G. C.&S.F. Survey. Continental Oil Co.'s No. 8 University-A, 2,310 feet south and 330 feet east of the NW cor., Section 6, Block 17, University Land. Messenger and others' No. 1 Butz, 1,830 feet southeast of the northwest line and 1,170 feet northeast of the southwest line of Section 54, Block 10, H.&G.N. Survey. Plymouth Oil Co.'s No. 1 F. A. Perry (Section 13) 330 feet south and east of the NW cor., Section 13, Block 194, G.C.&S.F. Survey.

Magnolia Petroleum Co.'s No. 1 L. L. Byrne, 2,490 feet northwest of the southeast line and 2,490 feet northeast of the southwest line of Section 54, Block 10, H.&G.N. Survey. McCurdy & Brown's No. 2 J. H. Tippett (Humble Oil & Refining Co.), 150 feet south and east of the NW cor. SE, Section 40, Block 194, G.C.&S.F. Survey. Simms Petroleum Co.'s No. 7 Mrs. M. A. Smith-A, 1,667 feet south and 330 feet east of the NW cor., Section 24, Block 194, G.C.&S.F. Survey.

Shackelford County

Skelly Oil Co.'s No. 5 J. B. Matthews-S, 750 feet north and 150 feet east of the SW cor. SW NE, Section 31, Block 10, E.T.R.R. Survey. The Texas Company's No. 1 J. B. Matthews, 644 feet north and 1,610 feet west of the SE cor. S half SE, Section 57, Block 10, E.T.R.R. Survey.

Carter Development Co.'s No. 1 J. H. Nail, (Section 135) at the C SE, Section 135, Block 10, E.T.R.R. Survey.

Taylor County

Eastland Oil Co. and others' No. 1 A. W. Hunter, 3,418 feet north and 1,574 feet west of the southeast corner of the William R. Ellis Survey.

Throckmorton County

Seitz and others' No. 1 R. W. Kelley, 150 feet north and east of the southwest corner of the east half of the southwest of the J. B. Graham Survey, No. 2, A-1,421.

Tom Green County

Minntex Oil Co.'s No. 1 Campbell estate, 446 feet north and 630 feet east of the SW cor., Section 180, District 11, S.P.R.R. Survey.

Ward County

Bradford and others' No. 1 M. B.

PETROLEUM

AND

TRADING

CORPORATION

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CARL H. PFORZHEIMER & CO.

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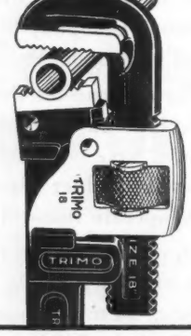
CABLE ADDRESS "EXPLORING" DULUTH



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TRIMO's leadership in the oil fields is based on no trick claims, no flash in the pan wave of popularity.

Strength and safety have made TRIMO first choice. The handle is drop forged not cast — and heat treating gives the extra toughness to stand terrific strain.

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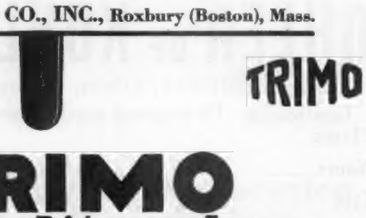

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Coleman County

F. A. Lane's No. 1 E. E. Rich, 870 feet north and 450 feet west of the SE cor., Section 5, Comal County School Land, No. 181. Roberts Oil and Atlantic Oil Producing Co.'s No. 1 R. O. McClure, 1,967 feet south and 330 feet west of the northeast corner of the R. O. McClure 400-acre tract out of the J. B. Beall Survey, No. 301.

Sterling Petroleum Co.'s No. 1 E. S. Cox, 300 feet south and east of the northwest corner of the north 30 acres of the W half SW, Section 30, H.T.&B. Survey. J. L. Hamon's No. 1 J. W. Wells, 450 feet south and east of the northwest corner of the south 71 acres of Section 15, North Subdivision, M. Martinez Survey, No. 751. Lloyd Oil Corp.'s No. 14 R. G. Bartholomew, 2,650 feet north and 1,075 feet east of the southwest corner of the W. Farris Survey No. 279, being 405 feet northwest of No. 13.

Cooke County

Clark & Van Orden's No. 1 F. Robinson, 276 feet south and 150 feet east of the northwest corner of the D. C. Robinson Survey, A-855. Danciger Oil & Refining Co.'s No. 2 H. Fleitman, 150 feet south and 450 feet east of the northwest corner of the H. Fleitman 55-acre tract out of the J. Clark Survey, A-194. Danciger Oil & Refining Co.'s No. 1 J. W. Mount-C, 150 feet north and 240 feet east of the southwest corner of the J. C. Meeks Survey, A-758. Danciger Oil & Refining Co.'s No. 1 J. C. Reaves and others, 250 feet south and 150 feet west of the northeast corner of the south 60 acres of the J. C. Reaves and others 126-acre tract out of the A. G. Harris Survey, A-1,652. Deep Rock Oil Co.'s No. 1 R. M. Lawson, 150 feet north and east of the southwest corner of the R. M. Lawson 210.5-acre tract out of the H. Nail Survey, A-790. Gulf Production Co.'s No. 2 J. T. Donald, 1,750 feet 28 degrees east of the north corner of the M. J. Doyle Survey, A-1,672, and 161 feet south 62 degrees east of the northwest line of the J. T. Donald 369-acre tract out of the John Guffey Survey, A-1,545.

Comanche County

Lone Star Gas Co.'s No. 1 A. Dunn, 320 feet south and west of the northeast corner of the N. H. Rector Survey.

Crane County

Gulf Production Co.'s No. 80 McElroy, 2,103 feet south and 3,300 feet west of the northeast corner of Gulf Production Co.'s lease out of Section 201, Block F, C.C.S.D.&R.G.N.G. Survey. Same company's No. 81 J. T. McElroy, 2,762 feet south and 3,630 feet east of the northwest corner of the Gulf Production Co.'s lease out of Section 200, Block F, C.C.S.D.&R.G.N.G. Survey. C. C. Duffey's No. 1 Cowden Brothers & Co.-C, 2,640 feet north and 3,960 feet east of the southwest corner of the J. Cordona Survey.

Gulf Production Co.'s No. 82 J. T. McElroy, 2,762 feet south and 990 feet east of the northwest corner of the Gulf Production Co.'s lease out of Section 200, Block F, C.C.S.D.&R.G.N.G. Survey. Church & Fields' No. 3 University-Collett, 990 feet north and 330 feet west of the SE cor. W half NE, Section 34, Block 30, University Land.

Crockett County

Magnolia Petroleum Co.'s No. 2 A. C. Hoover, 2,310 feet north and 335 feet west of the SE cor., Section 2, Block FF, B.&B. Survey, A-4,500.

Culberson County

Grisham-Hunter Corp.'s No. 2 W. D. Garren, 2,475 feet north and 1,566 feet west of the SE cor., Section 20, Block 89, School Land.

Eastland County

Southern Oil & Producing Co.'s No. 1 C. F. Summerall, 1,000 feet south and 660 feet east of the NW cor. SW, Section 6, Block 4, H.&T.C. Survey. Anna Belle Oil Co.'s No. 1 M. V. Hoyt, 2,600 feet south and 1,800 feet east of the NW cor., Section 84, Block 4, H.&T.C. Survey.

Hoffman & Page's No. 4 S. N. Coon, 150 feet south and 1,152 feet east of the northwest corner of the S. N. Coon 77.6-acre tract out of Section 27, Block 2, H. &T.C. Survey. Humble Oil & Refining Co.'s No. 2 E. A. Whitesides, 2,711 feet south and 2,650 feet west of the northeast corner of the J. Rubarth Survey.

Ector County

Humble Oil & Refining Co.'s No. 1 E. J. Jones, 330 feet north and 423 feet east of the SW cor., Section 44, Township 3s, T.&P. Survey. Landreth Production Corp.'s No. 4 University-T, 330 feet south and 1,320 feet west of the NE cor., Section 3, Block 35, University Land.

Erath County

R. C. McCarter and others' No. 1 J. H. Cage, 1,525 feet north and 1,080 feet west of the SE cor., Section 29, H.T.&B. Survey.

Irion County

Straughan and Texannati Oil Co.'s No. 3 J. M. Nutt, 804 feet south and 150 feet west of the NE cor. NW NW, Section 6, Gonzales County School Land.

Williams & Williams Drilling Co.'s No. 1 W. M. Noelke, 200 feet south and 1,020 feet west of the NE cor., Section 8, City of San Antonio Survey.

Jack County

Panhandle Refining Co.'s No. 3 Leffel-Morrissey-A, 1,077 feet north and 206 feet west of the southeast corner of its 143-acre lease "A," out of the I. Hughson Survey A-256.

Loving County

Henshaw and others' No. 1 Reagan & McElvain, 990 feet northwest of the southeast line and 330 feet northeast of the southwest line of Section 84, Block 1, W.&N.W.R.R. Survey.

Palo Pinto County

Bennings and others' No. 1 R. C. and R. D. Hinkson, 2,900 feet south and 500 feet west of the NE cor., Section 86, Block 3, T.&P. Survey. F. Guyer, trustee's No. 1 G. C. Jones, 150 feet north and west of the southeast corner of the north 40 acres of the J. A. Fortune Survey, A-185.

Pecos County

Cardinal Oil Co.'s No. 2 J. H. Tippett (Tidal), 150 feet north and east of the SW cor. NE, Section 40, Block 194, G. C.&S.F. Survey. Continental Oil Co.'s No. 8 University-A, 2,310 feet south and 330 feet east of the NW cor., Section 6, Block 17, University Land. Messenger and others' No. 1 Butz, 1,830 feet southeast of the northwest line and 1,170 feet northeast of the southwest line of Section 54, Block 10, H.&G.N. Survey. Plymouth Oil Co.'s No. 1 F. A. Perry (Section 13) 330 feet south and east of the NW cor., Section 13, Block 194, G.C.&S.F. Survey.

Magnolia Petroleum Co.'s No. 1 L. L. Byrne, 2,490 feet northwest of the southeast line and 2,490 feet northeast of the southwest line of Section 54, Block 10, H.&G.N. Survey. McCurdy & Brown's No. 2 J. H. Tippett (Humble Oil & Refining Co.), 150 feet south and east of the NW cor. SE, Section 40, Block 194, G.C.&S.F. Survey. Simms Petroleum Co.'s No. 7 Mrs. M. A. Smith-A, 1,667 feet south and 330 feet east of the NW cor., Section 24, Block 194, G.C.&S.F. Survey.

Shackelford County

Skelly Oil Co.'s No. 5 J. B. Matthews-S, 750 feet north and 150 feet east of the SW cor. SW NE, Section 31, Block 10, E.T.R.R. Survey. The Texas Company's No. 1 J. B. Matthews, 644 feet north and 1,610 feet west of the SE cor. S half SE, Section 57, Block 10, E.T.R.R. Survey.

Carter Development Co.'s No. 1 J. H. Nail, (Section 135) at the C SE, Section 135, Block 10, E.T.R.R. Survey.

Taylor County

Eastland Oil Co. and others' No. 1 A. W. Hunter, 3,418 feet north and 1,574 feet west of the southeast corner of the William R. Ellis Survey.

Throckmorton County

Seitz and others' No. 1 R. W. Kelley, 150 feet north and east of the southwest corner of the east half of the southwest of the J. B. Graham Survey, No. 2, A-1,421.

Tom Green County

Minntex Oil Co.'s No. 1 Campbell estate, 446 feet north and 630 feet east of the SW cor., Section 180, District 11, S.P.R.R. Survey.

Ward County

Bradford and others' No. 1 M. B.

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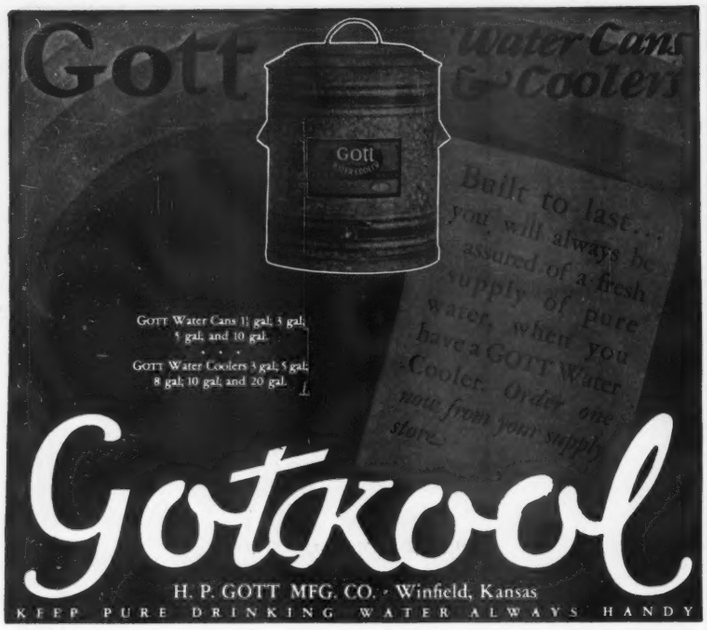
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The OIL and GAS JOURNAL

Murry, 1,782 feet southeast of the northwest line and 2,157 feet northeast of the most southwesterly southwest line of Section 11, Block 5, H.&T.C. Survey.

Wichita County

L. Hodges and others' No. 1 G. W. Womack, 150 feet south and 1,050 feet east of the NW cor., Section 12, Tarrant County School Land, A-282. Arkansas Fuel Oil Co.'s No. 45 Kemp & Kempner-B, 1,200 feet south and 750 feet west of the southeast corner of Block 81, Kemp Wichita Valley Land, and located in Block 82. R. R. Clark and others' No. 5 W. P. and J. F. Bickley, 750 feet south and 150 feet west of the NE cor., Section 2, C.&M. Survey, A-594. L. P. Hammond's No. 3 B. N. Ferguson, 150 feet south and west of the northeast corner of Lot 16, D.L.&C. Co. Survey, A-712. T. F. Hunter's No. 14 J. L. and T. J. Waggoner-C, 150 feet north and 1,400 feet east of the southwest corner of Lot 1, H. George Survey, A-454. J. Pyle and others' No. 1 W. W. Overby, 1,196 feet north and 731 feet east of the southwest corner of the J. M. Sharp Survey, A-262, being 150 feet north and west of the southeast corner of their 20-acre lease.

J. H. Cotton's No. 1 W. H. Chilson, 1,969 feet south and 1,280 feet west of the NE cor., Section 3, Denton County School Land, League 4, A-417.

Wilbarger County

McCarty Oil Co.'s No. 1 W. T. Waggoner-B, 810 feet south and 150 feet west of the NE cor. S half, Section 38, Block 4, H.&T.C. Survey.

Young County

Baker & Omohundro's No. 1 Mrs. M. Powell, 150 feet north and 1,729 feet west of the SE cor. S half, Section 1,586, T.E.&L. Survey. Bolin & Lindsey's No. 8 D. L. Wolf, 260 feet north and 450 feet west of the southeast corner of their 30-acre lease out of Section 165, T.E.&L. Survey. Consolidated Oil Co.'s No. 1 J. A. Walker, 150 feet north and east of the southwest corner of the north 25 acres of the south 60 acres of the J. A. Winkler 100-acre tract and located in the J. Poitevent Survey, No. 1, A-226. Cornelius & Vandiver's No. 1 J. A. Hutchings, 150 feet south and east of the northwest corner of the east 40 acres of the J. A. Hutchings 155-acre tract out of Section 230, T.E.&L. Survey. Davis & Quinn's No. 1 L. Rochelle, 1,200 feet south and 150 feet west of the most easterly northeast corner of the E. Crockett Survey, A-58. Fain-McGaha Oil Corp.'s No. 1 J. C. Thompson, 1,200 feet north and 1,400 feet west of the SE cor., Section 214, T.E.&L. Survey.

Hawkins & Holcombe's No. 1 C. R. Garvey and others, 750 feet north and 1,050 feet west of the SE cor., Section 1,858, T.E.&L. Survey. N. Hill and others' No. 1 E. Deitrich, 150 feet north and west of the southeast corner of the east 30 acres of the north half of the E. Deitrich 145-acre tract out of the G. W. Stell Survey, A-256. F. P. Hynes' No. 1 O. Deitrich, 150 feet north and east of the SW cor. E half, Section 10, Crawford Subdivision, I. Holeman Survey, A-130. F. P. Hynes' No. 1 W. S. Husted-B, 150 feet south and east of the northwest corner of the east 20 acres of the S half SW, Section 241, T.E.&L. Survey. Independent Oil & Gas Co.'s No. 11 J. F. Larimore, 150 feet north and 464 feet west of the SE cor., Section 2,246, T.E.&L. Survey. Same company's No. 12 J. F. Larimore, 150 feet north and 778 feet west of the SE cor., Section 2,246, T.E.&L. Survey. Same company's No. 13 Larimore, 150 feet north and 1,078 feet west of the SE cor., Section 2,246, T.E.&L. Survey. Same company's No. 14 Larimore, 150 south and 1,392 feet west of the NE cor. S half, Section 2,246, T.E.&L. Survey. Same company's No. 15 Larimore, 150 feet north and 1,378 feet west of the SE cor., Section 2,246, T.E.&L. Survey. Same company's No. 16 Larimore, 450 feet south and 464 feet west of the NE cor. S half, Section 2,246, T.E.&L. Survey. Same company's No. 17 Larimore, 450 feet north and 464 feet west of the SE cor., Section 2,246, T.E.&L. Survey. Kliner & Riggs' No. 2 J. F. Larimore, 150 feet north and 450 feet west of the southeast corner of the west 80 acres of the east 120 acres of the N half, Section 2,246, T.E.&L. Survey. E. B. Lawson's No. 1 H. L. Leberman, 780 feet south and 150 feet west of the NE cor., Section 211, T.E.&L. Survey.

Lyles-Kimbell & Mitchell's No. 1 E. F. Brown, 1,110 feet south and 450 feet east of the northwest corner of the north 80 acres of the east 160 acres of Section 258, T.E.&L. Survey. P. Marr and others' No. 1 Bunger & Lisle, 450 feet north and 750 feet west of the SE cor. SE, Section 260, T.E.&L. Survey. C. Massengale's No. 1 J. W. Davis, 150 feet south and east of the northwest corner of the east 60 acres of the S half, Section 1,395, T.E.&L. Survey. A. M. Meeks and others' No. 1 H. Hausley, 450 feet north and 150 feet east of the southwest corner of the west 20 acres of the south 40 acres of the H. Hausley 110-acre tract and located in the W. H. Keen Survey, A-1,932. Paramount Oil Royalty, Inc.'s No. 3 J. K. Thomas, 1,587 feet north and 450 feet east of the SW cor., Section 155, T.E.&L. Survey. Primrose Refining Co.'s No. 1 I. M. Kilpatrick, 150 feet north and 800 feet east of the SW cor., Section 1,446, T.E.&L. Survey. E. M. Remington's No. 1 A. E. Logan, 450 feet south and 1,050 feet east of the northwest corner of the south 60 acres of the SW, Section 2,251, T.E.&L. Survey. Riner & Omohundro's No. 1 J. C. Rushing, 750 feet north and 150 feet west of the SE cor. SW, Section 212, T.E.&L. Survey. O. H. Simpson and others' No. 3 B. H. Larimore and wife, 450 feet north and 150 feet east of the SW cor. N half NW, Section 2,247, T.E.&L. Survey. H. F. Smith and others' No. 1 P. C. Reynolds, 150 feet south and west of the NE cor., Section 340, T.E.&L. Survey. C. Wainwright's No. 1 C. Wainwright, at the center of the west 80 acres of the north 173.3 acres of Section 220, T.E.&L. Survey. J. F. West and others' No. 1 A. C. Watson, 150 feet north and west of the southeast corner of the south 40 acres of the north 80 acres of the E half, Section 250, T.E.&L. Survey. Wetheimer & Daube's No. 1 J. R. Brock, 150 feet north and east of the southwest corner of the J. R. Brock 40-acre tract out of Section 353, T.E.&L. Survey.

Willis & Terrell's No. 1 Belknap Coal Co., 750 feet south and 1,050 feet west of the NE cor., Section 2,250, T.E.&L. Survey. Wise & Jackson's No. 1 W. S. and J. P. Marshall, 150 feet north and east of the SW cor., Section 617, T.E.&L. Survey. Wooten & Reed's No. 2 M. E. McBrayer, 150 feet north and east of the SW cor., Section 1,907, T.E.&L. Survey. Wooten & Reed and others' No. 1 D. G. Vick-A, 1,440 feet north and 1,506 feet west of the most northerly southeast corner of the P. R. Splane Survey, No. 4, A-259. Young Brothers and Terrell's No. 1 J. F. Larimore, 150 feet south and 228 feet east of the NW cor. N half SW, Section 253, T.E.&L. Survey. Young Brothers & Terrell's No. 2 J. F. Larimore, 150 feet south and 528 feet east of the NW cor. N half SW, Section 253, T.E.&L. Survey. Gray & Slick's No. 1 S. W. Haggard, 150 feet south and west of the NE cor., Section 744, T.E.&L. Survey. Roeser-Pendleton and Slick's No. 1 J. R. Jeffery, 2,280 feet south and 3,250 feet west of the northeast corner of the J. R. Jeffery 609-acre tract out of Section 3,408, Fractional "B," T.E.&L. Survey.

E. R. Riggs' No. 15 B. H. Larimore and others, 1,050 feet south and 150 feet west of the NE cor. W half SW, Section 2,247, T.E.&L. Survey. W. M. Shriver's No. 1 S. Corely and others, 150 feet north and east of the southwest corner of the south 30 acres of the west 40 acres of the north 160 acres of Section 196, T.E.&L. Survey. T. E. Trunick and others' No. 1 T. J. Routin, 150 feet south and 450 feet east of the NW cor., Section 627, T.E.&L. Survey. G. W. Ewing and others' No: 1 Davis estate, 150 feet north and west of the southeast corner of the Davis estate 13-acre tract out of the S.P.R.R. Survey, No. 3, A-1,754. Hynds & Parker's No. 1 Max Eppstein, 885 feet south of the north corner and 200 feet east of the west line of the Max Eppstein 311-acre tract out of the J.

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Conner Survey, A-57. L. A. Long and others' No. 1 J. G. Crow, 150 feet northwest of the northwest line and 200 feet southwest of the northeast line of the J. A. Stevenson Survey, A-2,298, and located in the J. G. Crow Survey, A-2,116. Panhandle Refining Co.'s No. 1 J. Mayes, 990 feet north and east of the SW cor., Section 439, T.E.&L. Survey.

Corrections

In Archer County: Junker & Perkins' No. 1 E. W. Hunt, 150 feet north and 1,470 feet east of the southwest corner of the south 40 acres of the W half, Section 18, Club Ranch Subdivision.

In Shackelford County: Skelly Oil Co.'s No. 1 J. B. Matthews-S, 150 feet south and west of the NE cor. NW NE, Section 31, Block 10, E.T.R.R. Survey.

In Young County: Shaw & Knox's No. 4 M. R. Jarnigan, 766 feet northwest of the northwest line of the W. J. Orrick Survey, A-217, and 150 feet east of the bank of the Brazos River, and located in the John Conner Survey, A-57. Shaw & Knox's No. 2 M. K. Jarnigan, 550 feet northeast of the southwest line and 200 feet northwest of the southeast line of the M. K. Jarnigan 43-acre tract out of the John Conner Survey, A-57.

In Coleman County: Lloyd Oil Corp.'s No. 13 R. G. Bartholomew, 2,300 feet north and 1,300 feet east of the southwest corner of the W. Farris Survey, No. 279.

DECLINE IN OIL BURNER SALES FIRST SIX MONTHS

By Charles E. Kern

Washington Bureau, The Oil and Gas Journal

WASHINGTON, D. C., Aug. 2.—According to the oil burner report for June, issued monthly by United States Census Bureau, the shipments of oil burners for that month, as reported by 50 manufacturers whose output constituted 60 per cent of the total for the industry in 1927, amounted to 5,305 compared with 5,901 in May and 5,146 for June a year ago.

A slight decrease in the new orders placed is shown for June this year as compared with the same month of the previous year. The report shows only 5,256 new orders for June, 1930, and a total of 6,962 for June a year ago. At the end of June, 1930, stocks amounting to 8,563 burners were reported and only 6,496 burners in stock in June, 1929. However, there is shown a decrease in the unfilled orders for June, 1930, as compared with the same month a year ago. This year the unfilled orders at the end of June amounted to only 2,473 burners, while the total unfilled orders for the same month in 1929 was 4,347 burners.

Total shipments for the month of June, 1930, show a slight increase over the same month a year ago. Shipments for June, 1929, totaled 5,146 burners while the shipments for June of this year showed an increase of about 160 burners or 5,305 shipments.

Of the total 5,305 shipments recorded for June, 1930, it is shown that 5,192 shipments were in the United States, while 25 shipments wen to Canada and 88 shipments to foreign countries. Of the total 5,146 shipments in June, 1929, a total of 4,963 burners were for United States use, 70 shipments went to Canada and 101 to foreign countries.

The total new orders for the first six months of 1930 shows a decrease as compared with the total orders for the same period of the previous year. According to the report there were only 26,410 new orders in the first six months of 1930, while there were 27,306 orders for that period of 1929.

The total shipments for the first half of 1930 were 24,928; of this total 24,235 burners were for United States use, while 190 went to Canada and 503 shipments were for foreign use. The total shipments for this period of 1930 shows an increase over 1929 according to the report. For the first half of 1929, 23,810 total shipments were made; of this total 22,966 were for the United States and 296 were shipped to Canada, while 548 shipments were for foreign markets.

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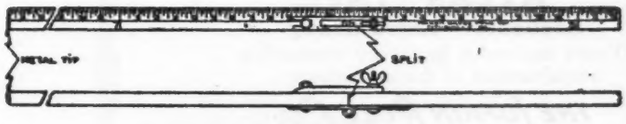

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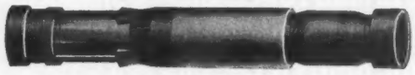

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COMPLETING REPORTS ON FIELDS IN PENNSYLVANIA

HARRISBURG, Pa., Aug. 2.—Topographic engineers have completed mapping the Coalmont quadrangle of Huntingdon, Bedford and Fulton Counties. They are making rapid progress in mapping the Loysville quadrangle, mainly in Perry County; the Ralston in eastern Lycoming County; the Starrucca quadrangle in northern Wayne County, and have begun work on the Galeton, Hoytville and Ramseyville quadrangles in Tioga and Lycoming Counties, the Caledonia and Driftwood quadrangle in Elk and Cameron Counties, the Coburn and Mifflinburg quadrangle in Centre, Union and Snyder Counties, the LaPorte and Millville in Sullivan, Lycoming, Columbia and Montour Counties. With the completion of these 13 quadrangles of 225 square miles each, there remain only 26 quadrangles to complete the topographic mapping of the State.

J. D. Sisler, with assistance from E. R. Barnsley, F. T. Moyer and M. N. Shaffner, is completing his report on the oil and gas fields in Pennsylvania. This study has occupied years and already the report is a 1,200-page manuscript.

Prof. C. R. Fettke, assisted by W. A. Copeland and W. H. Seifert, is concluding his detailed study of the Bradford oil field and the geology of the Bradford quadrangle. This work has been in progress for four years. Professor Fettke is also continuing his search for criteria by which the deep oil and gas sands of Pennsylvania can be distinguished as brought up by the sand pump.

TOTAL RECOVERY IN LAREDO

Since the discovery well was developed nine years ago, the Laredo Field in Southwest Texas has had a total recovery of 23,423,980.22 bbls., according to a report completed by Harry L. Fanster, statistician for the district. Seven pipe lines serving the Laredo Field in June had a total run of 285,207.38 bbls., an average of 9,506 bbls. daily, and the production was taken from 860 wells.

GEOLOGICAL SOCIETY MEETS

The Kansas Geological Society held its regular monthly meeting at Timmermeyer's Grove, northwest of Wichita, August 2. Roy Hall, Gypsy Oil Co., gave an interesting paper at the meeting on "An Outline of the Geology Along the Route to be Followed by the Fourth Annual Field Conference of the Kansas Geological Society."

LEGAL

NOTICE OF SALE OF OIL AND GAS LEASE.
DEPARTMENT OF THE INTERIOR
UNITED STATES LAND OFFICE
Washington, D. C., July 17, 1930.

Notice is given that the following described lands in two units in Pawnee County, Oklahoma, are offered for sale under section 17 of the leasing act of February 25, 1930 (41 Stat. 437), at the royalty rates for oil and gas and in accordance with the drilling requirements fixed in the standard lease form, copy of which may be procured from the Commissioner of the General Land Office:

Unit No. 1—
T. 20 N., R. 9 E., Sec. 35, lot 2 (13.40 acres).
Unit No. 2—
T. 20 N., R. 9 E., Sec. 35, lot 3 (12.05 acres).

Offers may be submitted on each unit and on the combined units, each unit to be considered separately as to drilling requirements and royalty rates.

The sale will be held at 10:00 a. m. on 10th day of September, 1930, at the office of the U. S. Geological Survey, 411 Wright Building, Tulsa, Oklahoma, and the successful bidder will be required to deposit on the date of sale one-fifth of the bonus bid by certified check on a solvent bank, or cash.

The bidders are warned against violation of the provisions of section 59, U. S. Criminal Code, approved March 4, 1909, prohibiting any unlawful combination or intimidation of bidders.

The right is reserved to reject any and all bids in the discretion of the Secretary of the Interior.

(Signed) C. C. Moore,
Commissioner.

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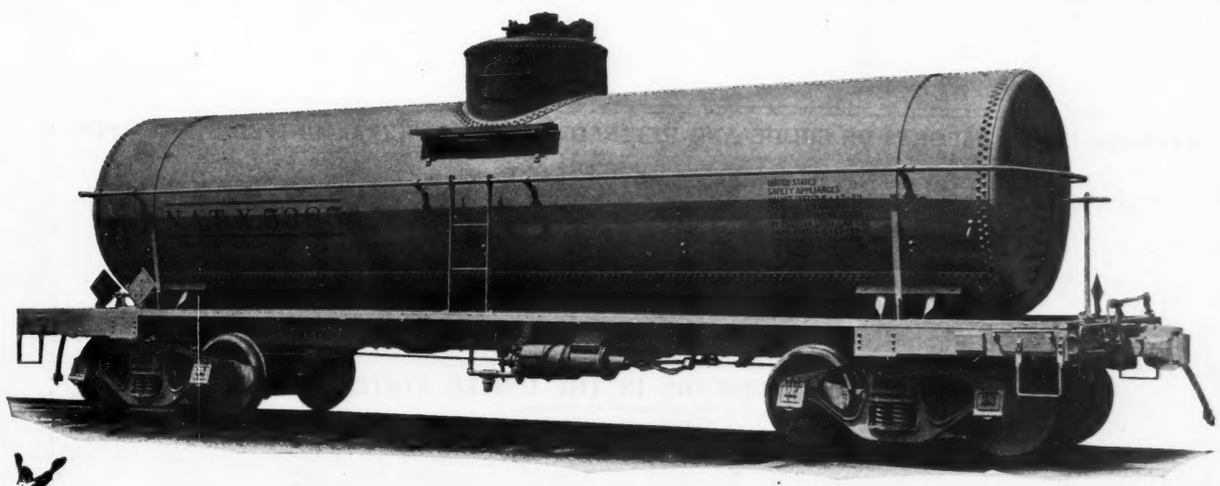

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